Bernalillo County

Pedestrian and Bicyclist Safety Action Plan

DRAFT June 2011

Isleta Boulevard, an example of a Complete Street

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1.0 Plan Summary

1.1 Purpose

For the last several years the Federal Highway Administration (FHWA) has recommended communities prepare and adopt Pedestrian Safety Action Plans. This is in response to the continuing number of pedestrian crashes both nationally and here in New Mexico, which has one of the highest pedestrian fatality rates.

Pedestrian and bicyclist facilities are an integral part of the Bernalillo County transportation system. They include sidewalks in the more urban areas, soft-pavement trails in the rural areas, bike lanes along major roads, and bike trails and equestrian trails off the road network. When planning for pedestrian and bicyclist facilities, the primary goal is to ensure safety for all travelers along county roadways, especially children on routes to school and access for disabled persons to transit stops. Other goals include:

- Provide choice in transportation to work, school, and shopping for all ages and abilities,
- Promote healthy lifestyles and recreational opportunities for all ages and abilities by encouraging residents to exercise daily,
- Reduce energy use and improvement of air quality.

This plan will identify some of the pedestrian and bicyclist issues by County planning areas. It includes a survey of existing plans, an inventory of existing facility needs, proposed policy changes, and proposed/ prioritized projects.

1.2 Findings

The following pedestrian-bicycle findings are provided in the plan:

- ✓ Most of the unincorporated County growth over the past decade has been in the Northeast and Northwest areas. Projections indicate most future growth will be in the Southwest area of the unincorporated County.
- ✓ Several County adopted area and sector plans make policy recommendations for pedestrian and bicycle facilities.
- ✓ The regional Metropolitan Transportation Plan recommends constructing many miles of bicycle and pedestrian facilities in the unincorporated County.
- ✓ Data on pedestrian and bicycle travel is sketchy but indicates about 3% of the County population make their trip to work by these means. Recreational pedestrian and bicycle trips are thought to be much higher.
- ✓ Existing facilities in the unincorporated County include 30 miles of trails, 21 miles of bike lanes, and 56 miles of sidewalk.
- ✓ An inventory of pedestrian facilities found most roadways lack sidewalks; those which do have sidewalks contain obstructions, are too narrow, and are ADA non-compliant.
- ✓ Bikeway needs include narrow widths, inadequate signage and markings, and gaps in the bikeway system.
- ✓ Multi-use trail needs include rehabilitating existing trails and completing trail gaps.
- ✓ A number of chronic diseases are attributable to the lack of physical activity, especially among children. Pedestrian and bicycle facilities can help address health issues.
- ✓ High pedestrian and bicycle crash rates indicate the lack of safe facilities on County roadways.
- ✓ A number of countermeasures can be designed into County roadways to make them safer for pedestrians and bicyclists.

1.3 Recommendations

The Action Plan contains a number of strategies for implementing the County's pedestrian and bicycle facility recommendations.

- *Capital Projects*

More than 80 pedestrian and bicyclist facility improvement projects have been identified totaling $30 million for three sub-areas of the County:

- New Collector Sidewalks – 16 tier 1 projects
- Corridor Bicycle/ Pedestrian Facilities – 12 projects
- School Safety Sidewalks/ Bikeways – 15 projects
- Parks, Comm. Center Bicycle/ Pedestrian Facilities – 7 projects
- Transit Station Bicycle/ Pedestrian Facilities – 2 projects
- Sidewalk Repair and Sidewalk Completion – 2 projects
- Extend Multi-Use Trails – 4 projects
- New Multi-Use Trails – 6 projects
- New Local Sidewalks – 20 tier 2 projects.

Projects will be scored and prioritized by Public Works CIP committee before being included in the General Obligation bond election. Some projects may be eligible for federal funding through the regional transportation improvement program (TIP) process.

- *Review and approval of private development*

Large subdivisions and master planned developments will be required to build pedestrian and bicycle facilities through the site plan approval process.

- *Traffic Impact Studies*

Site circulation plans will be required for all large commercial projects.

- *Street Standards*

Revisions to the County's street standards should include the following measures:

- Provide adequate pedestrian and bicycle facilities as part of all new roadway projects. Higher speed collector and arterial streets are of paramount concern.
- Sidewalks should be a minimum of 5 ft. wide with a 5 ft. buffer. Bike lanes are to be a minimum of 6 ft. wide. Multi-use trails are to be a minimum of 10 ft. wide.
- Flexibility is desired when retrofitting existing roadways where narrow rights-of-way exist and in rural environments.
- Improve intersections with bar crosswalk markings, adequate lighting, shorten crosswalk length with smaller turning radii, install countdown walk signals, and set signal timing to accommodate elderly and children. Midblock crossings at schools and other locations may require refuge islands and beacons or signals.
- Alternative traffic calming devices to speed humps may include chokers, traffic circles, diverters, chicanes, and islands.
- Transit stops should include ADA compliant landings.
- Limit residential block lengths to 600 ft. to increase walkability.
- Pedestrian access through cul-de-sacs and from public sidewalks and parking areas to building entrances are to be strictly applied.

- *Coordination with Partner Agencies*

Coordination with Albuquerque Public Schools, Middle Rio Grande Conservancy District, Albuquerque Metropolitan Arroyo and Flood Control Authority (AMAFCA), New Mexico Department of Transportation (NMDOT), ABQ Ride, Mid Region Council of Governments (MRCOG) and other agencies are necessary ensure adequate pedestrian and bicycle facilities in the unincorporated County.

2.0 Background

This section provides background on the County's planning areas. It describes the bicycle and pedestrian travel in the unincorporated area, and summarizes bicycle and pedestrian policies in the County's various area and sector plans, and regional transportation plans.

2.2 County Planning Areas

Between 2000 and 2008, most unincorporated County growth has been in the Northwest and Northeast areas. While substantial growth has occurred on the Southwest Mesa, most has been within the City limits.

- **Northeast County**

The Northeast area has been growing the most rapidly of the subareas at an annual rate of 2.6% (compared to overall unincorporated county growth of 1.1% annually). North Albuquerque Acres, Primrose Pointe, and Sandia Heights are located in the foothills region of the County, west of the Sandia Mountains, in the northeast corner of the County. This planning area of the County makes up about 10% of its unincorporated population.

- **East Mountains**

The East Mountains area has been growing at about 0.1% annually. This area includes the rural communities of San Antonio, Sandia Park, Sedillo, Cedar Crest, and Carnuel in the northern part of the County. The southern East Mountain planning area contains small communities such as Chilili, Juan Tomas, Escobosa, Ponderosa Pine, and Cedro. The East Mountains make up about 20% of the County's population.

Exhibit 1: Bernalillo County Unincorporated Area Population

	2000	2008	2035
Northeast County	8,189	9,882	12,783
Northwest County	19,807	19,925	75,027
Southwest County	48,270	51,991	144,877
Southeast County	4,878	4,799	9,173
East Mountains	16,771	20,057	29,809
Unincorporated County*	93,037	106,654	185,072
Total County	*556,002*	*649,916*	*1,037,719*

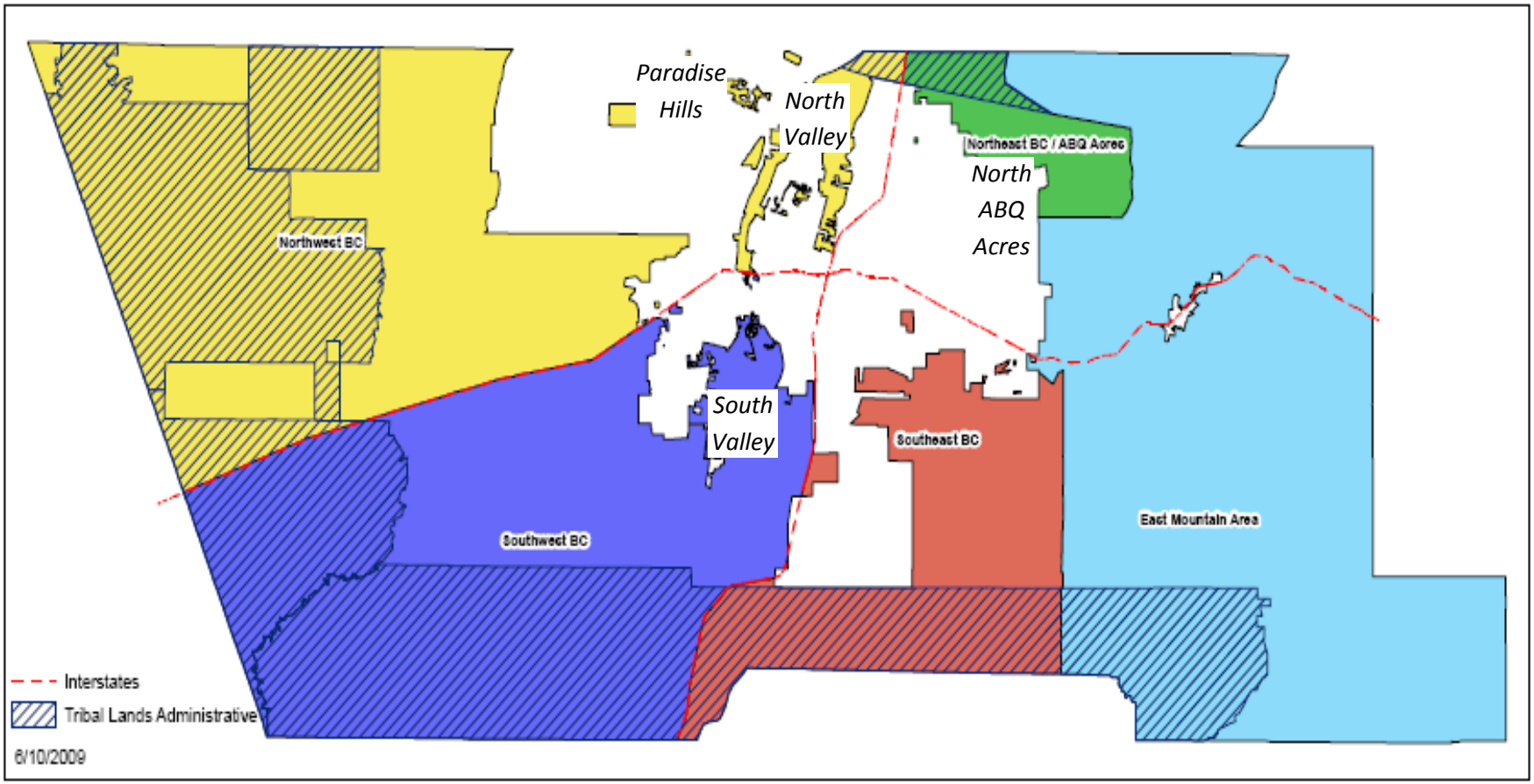
Sources: MRCOG, for unincorporated county projections, 2008

The East Mountains Area will not be included in this plan because of its largely rural character and in order not to replicate projects identified in the *East Mountains Bikeway and Trails Master Plan*.

- **Northwest County**

The Northwest area has been growing at an annual rate of 2.4%. The North Valley includes the unincorporated rural community of Alameda and the semi-rural Edith Blvd. corridor as well as Lee Acres and Duranes neighborhoods located between the Rio Grande and the East Mesa.

Paradise Hills on the northwest mesa was the earliest urbanized area outside the Albuquerque metropolitan area developed in the 1960s and 1970s, now surrounded by the City of Albuquerque. Paradise Hills, Sky View, and Alban Hills are in the northwest corner of the County. The North Valley and Paradise Hills areas together make up about 21% of the County's unincorporated population.



- **Southeast County**

The Southeast area of the County includes Kirtland Air Force Base and Mesa del Sol, the latter community is in the City. A small area of unincorporated County is located north of Mesa del Sol but has no population.

- **Southwest County**

The Southwest area is the most populous area of the unincorporated county but has been growing at 1% annually. (Most of the rapid growth has been in the Albuquerque incorporated area of the Southwest Mesa.) The South Valley is one of the oldest areas in Bernalillo County, and many families trace their lineage to the earliest settlers of Atrisco, Pajarito, and Los Padillas, whose livelihoods were directly tied to the land and the river. The area was predominantly agricultural until the early 1940s.

Exhibit 3a: Bernalillo County Commuting Patterns, 2000						
	Single Occupant	Carpool	Bus	Bicycle	Walking	Work at Home
Albuquerque	77.7%	12.5%	1.7%	1.1%	2.7%	4.3%
Bernalillo County	77.4%	13.0%	1.5%	0.9%	2.5%	3.8%
North Valley	76.1%	15.7%	0.1%	0.1%	2.8%	5.2%
South Valley	74.6%	18.8%	1.0%	0.0%	1.2%	4.3%
Exhibit 3b: Bernalillo County Commuting Patterns, 2005-09						
Albuquerque	77.7%	11.9%	2.0%	1.2%	2.1%	3.8%
Bernalillo County	77.9%	12.2%	1.8%	1.1%	1.9%	3.9%
North Valley	79.9%	9.6%	1.2%	0.3%	1.9%	5.1%
South Valley	78.2%	16.1%	0.6%	1.6%	0.5%	3.0%
Sources: US Census, American Community Survey; 2035 MTP, MRCOG						

The Southwest Mesa planning area is the southwestern most corner of Bernalillo County and includes much of the recent suburban subdivision development on Albuquerque's West Side. It also includes future Westland Master Plan. Together, the South Valley and Southwest Mesa make up 49% of the County's unincorporated population. This area is also expected to experience most of the county's growth over the next 20 years.

2.3 Pedestrian and Bicyclist Mobility

Data about pedestrian and bicycle travel in Bernalillo County is only available for commuter trips collected during the 2000 U.S. Census (Exhibit 3). The census data indicates that most work trips are by single occupancy vehicles. Almost 2% of commuters walk and 0.3% bike to work in the North Valley and 0.5% walk and 1.6% bike in South Valley. Walking to work is down since 2000 while biking is up. Pedestrian and transit trips are often linked. Estimates for recreational or non-employment walking and biking trips are much higher. It is also anticipated that the 2010 census will show non-vehicular commuter trips will increase significantly given the recent rise in gasoline prices and also general awareness of health and environmental benefits of walking and biking.

2.4 Existing Plans

Authority for the construction of pedestrian and bicycle facilities derives from Section 74-116 of the County Subdivision Ordinance states:

Alternative modes of transportation should be expanded and integrated into the street system to improve air quality and quality of life and reduce traffic congestion. Bikeways and trails as identified in the Trails and Bikeways Facility Plan and other adopted plans shall be required in order to provide circulation or access to schools, playgrounds, shopping centers, public transportation, and other community facilities.

The Albuquerque/ Bernalillo County Comprehensive Plan is the rank one plan; area and facility plans are rank two plans; and sector development, neighborhood, and corridor plans are rank three plans. All plans must be compatible with higher ranking plans for the same area. The *Pedestrian and Bicyclist Safety Action Plan* is a Rank 2 Facility Plan. Existing plans often use authoritative language such as "shall" or "required" since they are established policy of the County.

Adopted existing plans with pedestrian-bicycle recommendations include the following**:**

- Albuquerque/Bernalillo County Comprehensive Plan
- Parks, Open Space, and Trails Master Plan
- East Mountain Bikeways and Trails Master Plan (not included)
- Trails and Bikeways Facility Plan
- Arroyos Facility Plan (not included)
- 2035 Metropolitan Transportation Plan
- Area, Corridor, and Sector Development Plans.

County planning policies and strategies for pedestrian and bicyclist facilities are summarized below:

- **Trails and Bikeways Facility Plan, 1993, revised 1996; Draft Update, 2011**
  The City of Albuquerque is currently updating this plan and includes some portions of the unincorporated area. The *Pedestrian and Bicyclist Safety Action Plan* along with the *Long Range Bikeway Systems* map will replace the 1996 plan for the County. Provisions of the plan include:
  - Establishes a region-wide trails map
  - Identifies primary and seconday trail projects
  - Establishes a trails program with city staff
  - Establishes trail design standards for:
    - Pedestrian and jogging trails
    - Bike trails
    - Mountain bike trails
    - Accessible trails for persons with disabilities
    - Equestrian trails
    - Road and river crossing standards
    - Landscaping standards

- **Isleta Boulevard Sector Development Plan, 2008**
  - Promote trail networks in order to:
    - Allow for safe pedestrian activity;
    - Promote the utilization of local amenities; and,
    - Encourage physical health of the community.
  - Promote a safe and healthy environment in the form of walking trails, Bernalillo County should promote a Network Plan that seeks connections between the Isleta Boulevard Village Centers and their services.
  - Work with County and City Planning Departments, County and City Parks and Recreation Departments, County Public Works Division and City Municipal Department, and the Albuquerque Metropolitan Arroyo Flood Control Authority in order to locate, design, and construct a trail system around each of the Village Centers.
  - A trail system should be constructed in a manner that is accessible and that preserves the historic character of the South Valley.

- **Bridge Boulevard Village Center and Corridor Plan, 2010**
  Outside the Village Centers, the sidewalks will be narrower, 5 feet and separated from the street with a continuous landscape buffer. Street trees, street lights and pedestrian lights will be equally spaced and coordinated with existing utility easements.

  Around the Village Centers (at Five Points and Goff) where denser commercial development is anticipated, and therefore a higher level of pedestrian traffic is expected, the sidewalk will widen to 10 feet and extend from the street curb to the private property line. In these areas the sidewalk is distinguished by decorative paving patterns or decorative pavers and is punctuated by landscape cutouts, public art and site furnishings.

Crosswalks will respond to the following criteria:

1. Crosswalks shall be marked by striping and/or textured/ colored pavement for high visibility.
2. Raised medians shall be used for pedestrian refuges in all crosswalks with cut-throughs for wheelchairs.
3. Pedestrian countdown signals that are audible and visual shall be installed and signal buttons shall be located at the appropriate height next to the ramp landing.
   Signals shall be timed for children, seniors, and the disabled.
4. Two-stage pedestrian crossings with signals and/or beacons shall be used at all mid-block locations.
5. Crosswalks shall be placed before bus stops so pedestrians are visible to motorists. Bus stops may consist of a sign and bench or in areas of higher use, a shelter is appropriate.
6. Pedestrian lighting shall be installed along sidewalks and all crosswalks shall be well lit.
7. Pedestrian and accessible facilities are to be constructed according to AASHTO "Guide for Planning, Design, and Operation of Pedestrian Facilities."
8. Consolidate driveways and reduce the number of access points by developing shared access between properties.
9. Bus shelters require a 5 ft. wide and 8 ft. deep hard surface landing per ADA. ABQ Ride requires an 8 ft. wide by 12 ft. deep pad for each bus shelter.
10. All ramps shall be designed to ADA standards and be in line with crosswalks; two ramps at each corner are recommended.
11. All public art and site furnishings will be coordinated with existing bus stops to accentuate the way-finding and pedestrian experience.

To properly promote and support safe biking, good practices such as those detailed below should be followed:

1. Bike lanes need to be properly defined with a high contrast stripe. Ideally the lane is painted a solid color to distinguish the extents of the bike lane.
2. Bike lanes need to be marked with proper signage, both within the lane on the ground and with posted street signs.
3. Bike lanes need to be properly coordinated and marked at right turn lanes.
4. Short term bike parking (ranging from a piece of street furniture, to a standard bike rack to a bike locker) needs to be located throughout the length of the boulevard to accommodate visitors and customers to the area.
5. Short term bike parking needs to be visible, secure, well lit, unimpeded by stationary objects and easily accessible.
6. Bicycle facilities are to be constructed according to AASHTO "Guide for the Development of Bicycle Facilities."

- **Alameda Boulevard Design Overlay Zone (Corridor Plan), 1996**
  - Sidewalks shall be developed as a continuous system. Vehicle-free connections must be provided from all primary entries to the right-of-way as well as providing sidewalks along the right-of-way.
  - Sidewalk treatments shall be used in new construction to accentuate the basic characteristics of each Character Zone.
  - Where right-of-way is adequate, new sidewalks shall be set back a minimum of three to five feet from the curb. The setback shall be landscaped.
  - All sidewalks will comply with ADA standards.

- In (Village Center) enhance pedestrian crosswalks with textured and colored paving to create a pleasant, safe pedestrian system which links the community services.
- Provide bicycle links between the multi-use trail located on the south side of Alameda Boulevard and the Village Center. Include bicycle parking conveniently located to community and commercial uses.
- Provide bridle paths wherever possible.
- Complete the Alameda Boulevard multi-use trail to the North Diversion Channel trail and Balloon Park (in design)
- Provide pedestrian-only trails connecting Alameda Boulevard and neighborhoods along the acequias, and multi-use trails along acequia rights-of-way no longer used.
- Sidewalk regulations are the same as the Sidewalk Ordinance with the following additions:

    - Direct pedestrian access to commercial and office buildings must be possible from public sidewalks.
    - No driveways or parking lots paralleling Alameda Boulevard shall be located between new commercial and non-residential buildings and the public right-of-way.
    - Develop distinctive connecting paths between the school, church, Alameda Community Center, new plaza area, and commercial areas.

- **Paseo del Volcan/ North Albuquerque Acres Sector Development Plan, 2000**

- The sector plan includes traffic calming measures designed to encourage movement of traffic on the north-south roads by minimizing the number of stops required on north-south routes, and maximizing the number of stops and traffic-

Regional Trail on Browning Road

calming measures on the east-west routes. In particular, the plan has the following three traffic goals:

1. slowing vehicle speeds
2. distributing traffic evenly among east-west roads
3. reducing or eliminating cut-through traffic.

- The traffic calming plan places speed humps, mid-block islands, intersection traffic circles, and cul-de-sacs throughout the plan area. In addition, the plan calls for stop signs on east-west roads at intersections.
- Regional natural surface trails be soft-surfaced for equestrians and regional off-street bicycle paths be hard-surfaced.
- 8-foot minimum width natural surface trail on one side of the roadways and a 4-foot minimum width paved surface trail on the other side.

- **Southwest Area Plan, 2000**
  - Identify and build missing bicycle and pedestrian links
  - Promote the installation of bike lockers and showers (at the offices of major employers and at public buildings)
  - Design streets with geometry safe for bicycles (and pedestrians)
  - Increase bicycle and pedestrian facility construction and pavement striping.

- **North Valley Area Plan, 1993**
  - Consider restriping narrower driving lanes to promote additional space for sidewalks or walkways, bikeways, and bus stops
  - Seek agreement with MRGCD to establish notification procedures for ditch closures that include posting the affected right-of-way and holding advertised public meetings
  - Undertake a study of multiple-use of ditches and associated rights-of-way *(Ditches to Trails).*

- **Parks, Open Space, and Trails Master Plan, 2003**
  - Support APS "Safe Routes to School" initiative through appropriate trail development
  - Develop segments of the metropolitan trail network in the unincorporated County where consistent with the *Trails and Bikeways Facility Plan*
  - Work with developer to build trail along South La Cueva Arroyo between Lowell and Tennyson as part of Primrose Pointe Units 5 & 6 (completed)
  - Explore feasibility of extending the San Antonito/Vista Grande trail connection further south to the commercial center at Frost Road and NM 14.
  - Explore feasibility of extending the San Antonito/Vista Grande trail connection further north - along the designated Turquoise trail – with private landowners and NMDOT
  - Acquire and develop trail easement between Riverside Drain and Main Canal as close to the Sandia Reservation Boundary as possible
  - Develop trail or bike lane along Paradise Blvd. as part of road widening, either by City Public Works, BCPW, or by private developer(s) (partially competed).
  - Develop non-vehicular easement on north side of Alameda Blvd. between Albuquerque Main Canal and North Rio Grande Blvd.
  - Consider extending the Alameda Boulevard trail east from 4th Street to Balloon Fiesta Park. (under development)
  - Design and construct South Diversion Channel Trail Phase II (north side of Rio Bravo to Railroad spur).
  - Design and construct Tijeras Arroyo Phase II (South Diversion Channel to University Boulevard extension)

- **Tijeras-Carnuel Sector Development Plan, 2007**
  - Improve bicycle safety along the Old Route 66 corridor.
  - Meet with City of Albuquerque to consider the establishment of a park-and-ride location in the area for commuters into the metro area.
  - Continue communicating with the New Mexico Department of Transportation and the Tijeras Safe Passage Coalition on strategies for reducing the number of bear and deer killed by automobiles along I-40 and Highway 333.

2.5 Regional Transportation Planning

The County participates in regional transportation planning efforts as part of the Mid Region Council of Governments (MRCOG) Albuquerque Metropolitan Planning Area (AMPA). MRCOG prepares a 25-year metropolitan transportation plan (MTP) that identifies future transportation needs. It also prepares a six-year transportation improvement programs (TIP) for fiscally constrained projects of all modes. County pedestrian and bicycle projects identified on the Long Range Bikeways System (LRBS) map as part of the 2035 MTP and the 2010-2015 TIP are listed in the Appendix. The LRBS map identifies long-distance bikeways facilities such as:

- Unser Boulevard Trail
- Paseo del Norte Trail
- Isleta Drain Trail
- Isleta Blvd. south of Rio Bravo Blvd.
- Rio Bravo Blvd.
- Extension of Bosque Trail south of South Diversion Channel
- NM 333 east to Tijeras
- NM 14 north to Frost Rd.

The LRBS map also identifies bike routes (shared roadways) such as:

- Atrisco Dr.
- Sunset Rd.
- La Vega Dr.
- Tapia Blvd.
- Arenal Rd.
- Blake Rd.
- Lake View Rd.
- Metzgar Rd.
- Los Padillas Rd.
- Reading Dr.
- Elena Dr.
- Frost Rd. east of Vallecitos
- Mountain Valley Rd.

3.0 Pedestrian and Bicyclist Network

The County existing pedestrian and bicycle facility network is largely unbuilt. The *Long Range Bikeways System Map* identifies corridors where these facilities are to be built. There is an existing 21 miles of bike lanes, 16 miles of bike routes, 30 miles of multi-use trails and 56 miles of sidewalks in the unincorporated County.

3.1 Sidewalks

County staff has identified the following pedestrian facility needs. "Sidewalks" used in this section refers to concrete, asphalt, or soft-surface walkways within the roadway right-of-way. The County maintains about 56 miles of sidewalk on 730 miles of roadway.

- **Southwest**

The South Valley of the County has the most sidewalks with 27 miles but it also has the least amount of connectivity. Many sidewalks are in fair or good condition but 16.5 miles have obstructions or need repairs. Sidewalk repair needs include the following: two sections have gaps, four sections are broken, four sections have faulting, 12 locations are buckled, 18 places are overgrown with vegetation or weeds, and 31 locations are obstructed by signs, poles, fire hydrants, etc. South Valley sidewalks are concrete, asphalt, and soft-surface walkways. Most sidewalks are four feet wide and most with sidewalks have a vertical curb and gutter but no buffer between the curb and sidewalk. Eight streets have sidewalks of more than four feet in width and a few with as much as eight feet of walkway. 12 streets provide a buffer between the curb and gutter and sidewalk of between three and eight feet. Two streets with sidewalks have roll-over curb and three have flat curbing.

Exhibit 4: Bernalillo County Pedestrian and Bicycle Facilities

Facility	Existing	(BC Maint.)	Proposed	Total
Trails	29.3	22.1	33.2	62.5 miles
Bike Route	16.2	Not inventoried	17.2	33.4 miles
Bike Lanes	21.2	17.0	20.8	41.9 miles
Sidewalks	-	55.6	216.7	272.3 miles

Source: BC 2009 Inventory; LRBS Map; Lanes and Sidewalks both sides

Existing South Valley corridors with sidewalks include:

- Gun Club Rd. west of Coors Blvd.
- Isleta Blvd. from Bridge Blvd. to Rio Bravo Blvd.
- Arenal Rd. east of Coors Blvd. to Tapia Rd.
- Atrisco Dr. north of Bridge Blvd.
- Bridge Blvd.

Obstructions in Bridge Blvd. Sidewalk

Exhibit 5: Bernalillo County Sidewalk Inventory, 2009 (in miles)

											No. Segments					
	≥ Required Width	Narrow Width	Concrete	Asphalt	Soft-Surface	Vertical Curb	Roll-over Curb	Flat Curb	No Curb	Buffer	Obstructions*	Deficiencies**	Signalized Intersection Cross-walks	Mid-block Crosswalks	Non ADA Ramps***	Total Length
Southwest BC	16.9	10.9	26.9	0.3	0.6	25.6	0.3	1.3	0.6	14.0	34	22	14	4	25	27.8
Northwest BC	19.6	0	19.6	0	0	19.6	0	0	0	8.8	10	72	5	2	32	19.6
Northeast BC	8.2	0	5.4	2.8	0	4.4	0	0	2.8	7.4	0	5	1	2	7	8.2
East Mountains	Not inventoried (no sidewalks)															
Total	44.7	10.9	51.9	3.1	0.6	49.6	0.3	1.3	3.4	30.2	44	99	20	7	64	55.6

Notes: *Obstructions include sidewalks with poles, mailboxes, signs, and fire hydrants with less than 3 ft. of passable space
**Deficiencies are locations with scaling/ spalling, buckling, faulting, broken, cracked, and missing sidewalk sections; ***Includes unsignalized intersections

Nine South Valley elementary schools lack good pedestrian access except for Adobe Acres Elementary School.

Existing corridors where sidewalks are needed:

- Coors Blvd. from Old Coors Rd. to Gun Club Rd.
- Old Coors Rd. from Bridge Blvd. to Coors Blvd.
- Rio Bravo Blvd./ Dennis Chavez Blvd. from I-25 to 118th St.
- Pajarito Rd. west of Coors Blvd.

Future corridor extensions are to include sidewalks:

- 118th St.
- Unser Blvd. south of Rio Bravo.

No ADA curb ramp

The following narrow collector streets are located in Established Urban, Semi-Urban, and Developing Urban areas as designated in the Comprehensive Plan and require sidewalks:

- Atrisco Rd. (40 – 60 ft. right-of-way) south of Bridge Blvd.
- Sunset Rd. (40 – 50 ft. right-of-way) Feasibility study prepared between Bridge Blvd. and Yakima Rd. includes sidewalks.
- Sunset Gardens Rd. (40 ft. right-of-way) Sidewalks under construction in 2011.
- Goff Rd. (50 – 60 ft. right-of-way)
- Tapia Blvd. (40 – 50 ft. right-of-way)
- Blake Rd. (40 – 50 ft. right-of-way). Sidewalks are planned for construction between Barcelona Pl. and Coors Blvd. in late 2010.
- Barcelona Rd. (50 – 60 ft. right-of-way)
- Del Rio Rd./ Camino del Valle (50 – 60 ft. right-of-way)
- Gun Club Rd. (50 – 60 ft. right-of-way).

Collector streets in Semi-Urban and Rural areas may use a stabilized, compacted crusher fine walkway and have rollover curbs or stained concrete.

- **Northeast**

The Northeast sub-area of the County has the least amount of sidewalk; about 8 miles. Most sidewalks are in good condition but almost 2.5 miles has repair or other needs. Much of the sidewalk in this area is fairly recent and consists of a strip of asphalt separated from the roadway. Sidewalk needs include four locations with faulting, four sections with broken pavement, one buckled location, and 16 places with overgrown vegetation or weeds. Most streets have four foot wide sidewalks; some wider with as much as nine feet. Most streets with sidewalks have vertical curbing but many have none. The majority of streets provide a buffer between the roadway and the sidewalk of between two and 14 feet in width.

Deteriorating Asphalt Sidewalk

Developments with existing sidewalks include Primrose Pointe. The east side of Tennyson has a sidewalk. Sidewalks are under construction on the east side of Eubank Blvd. from San Antonio Dr. to Paseo del Norte.

Both Northeast County elementary schools, Double Eagle and North Star provide pedestrian connections from the neighborhood on Florence Ave., San Diego Ave., and Ventura St.

Asphalt sidewalks also exist along Lowell St. from Paseo del Norte to Elena Dr. and along Del Rey Ave. from Eubank Blvd. to Tennyson St. and along Eagle Rock Ave.

Existing corridors where sidewalks are needed:
- Alameda Blvd. from Ventura St. to Eubank Blvd.
- Eubank Blvd. from Paseo del Norte to Alameda Blvd.

Collector or minor arterial roads requiring soft-surface walkways in place of concrete sidewalks:

- Browning St.
- Tennyson St.
- Holbroook St.
- Barstow St.
- Modesto Ave.

- **Northwest**

Crusher Fine Sidewalk in North Valley

The Northwest sub-area of the County has about 20 miles of sidewalk. Like the South Valley, many areas of the North Valley lack connectivity. Most sidewalks are in poor condition; 83% need repairs other improvements. Most of the sidewalks in Paradise Hills were built in the 1960s before ADA requirements. Ramps are not provided at intersections on 32 streets. All are concrete sidewalks with vertical curbing and most are four feet wide with a four foot buffer. One street has three foot sidewalks and three streets have sidewalks five and six feet wide. Many areas of sidewalk had overgrown landscaping or weeds (178 locations) not being maintained by the property owner. In one instance, vegetation totally covered the sidewalk so that it was not visible. Among the substandard sidewalks: 10 sections have obstructions in the sidewalk preventing passage; 35 locations have buckled sidewalks; 25 places have faulted sidewalks, four locations have scaled /spalled sidewalks, one location has a missing section and another a drainage cut, and three places are broken.

Neighborhoods without sidewalks:

- Alban Hills and Sky View Acres
- Alameda neighborhoods

Some streets, mostly in the eastern portion of Paradise Hills, provide sidewalks as described above. Irving Blvd. has a sidewalk on its south side between Pase(ito) del Norte and Lyon Blvd, Golf Course Rd. on its east side and Lyon Blvd. a 6 ft. sidewalk on the west side.

Alameda Blvd. has a sidewalk on the north side and 4th St. on the west side. Both Sierra Vista and Alameda Elementary schools have sidewalk connections.

Sidewalks are needed on the following corridors:

- Paseo del Norte from Golf Course Rd. to Universe Blvd.
- La Orilla Rd. between Golf Course Rd. and Coors Blvd.

Spalled Sidewalk

Scaling Sidewalk

Exhibit 6: Bernalillo County Trails Inventory, 2009							
Trail Name	**Terminus**	**Area**	**Width**	**Pavement**	**Condition**	**Length**	**By Area**
Bosque Trail South	Bridge to South Diversion Channel	SW County	10 ft.	asphalt	poor to good	4.96	
Chavez Trail	South Diversion Channel to Bosque	SW County	8.5 ft.	asphalt	poor to fair	4.13	9.09
Del Rey Trail	Eubank Blvd. to Tennyson St	NE County	8 ft.	asphalt	poor to fair	1.44	
La Cueva Trail	Eubank Blvd. to Signal Ave.	NE County	10 to 11 ft.	asphalt	fair to good	0.58	
Paseo Del Norte	Tramway Blvd. to Eubank Blvd.	NE County	10 ft.	asphalt	poor to fair	1.53	
Primrose North	Lowell to Crimson Glory Rd.	NE County	4 to 12 ft.	asphalt/concrete	poor to good	0.36	
Primrose South	Summer Wind Rd. to Wilshire Ave.	NE County	5 ft.	asphalt	poor	0.52	
Tramway Trail	Tramway Rd. to Simms Park Rd.	NE County	12 to 13 ft.	asphalt	fair	2.20	6.64
Alameda Trail	Railroad to River	NW County	6 ft	concrete	good	1.52	
Paradise Blvd Trail	Golf Course Rd. to Justin Ct.	NW County	5 ft.	asphalt	fair to poor	0.63	
Lyon Blvd.	Paradise Blvd. to Irving Blvd.	NW County	8 ft.	asphalt	good	0.50	2.64
Total						*18.37*	*18.37*

3.2 Bike Lanes, Trails and Routes

As identified on the *Long Range Bikeways System Map*, this section identifies existing and planned bicycle facilities. The County maintains over 18 miles of multi-use trails and 22 miles of bike lanes. A number of roadways are also designated as bike routes on the LRBS map.

- **Southwest**

The Southwest area provides more multi-use trails bike lanes than any other area of the County. It maintains more than 9 miles of multi-use trails and 13 miles of bike lanes.

The Bosque del Rio Trail extends south of I-40 to the South Diversion Channel. (The County maintains the section south of Bridge Blvd.) The Chris Chavez Trail follows the South Diversion Channel loops back north to Rio Bravo Blvd. east of Broadway Blvd. A trail runs along Rio Bravo Blvd. between Broadway Blvd. and the river. The trail will be extended east to University Blvd. as part of a Rio Bravo/ I-25 interchange project.

The following multi-use trails are called for:

- Extend Rio Bravo Trail to the west
- Amole Arroyo Trail
- Isleta Drain Trail
- Arenal Canal Trail
- Tijeras Arroyo Trail
- South Diversion Channel north to Sunport Blvd.
- Extend Rio Grande Bosque Trail to Isleta Pueblo boundary

Isleta Blvd. and Bridge Blvd. provide bike lanes. Bike lanes are planned as part of the construction of the Sunport Blvd. extension from I-25 west to Broadway Blvd.

Exhibit 7: Bernalillo County Bike Lane Inventory, 2009							
Corridor	**Terminus**	**Area**	**Width**	**Striping**	**Parking**	**Condition**	**Length (miles)**
Isleta Blvd.	Bridge to Gun Club	SW County	4 ft.	yes	no	Fair, Good	8.38
Bridge Blvd.	River to Old Coors	SW County	3 to 9 ft.	yes	Isleta – La Vega	Fair	4.53
Alameda Blvd.	River to railroad	NW County	5 to 7 ft.	yes	no	Good	3.51
Golf Course Rd.	Paradise to Irving	NW County	3.5 to 4.5 ft.	yes	no	Good	1.71
Paradise Blvd.	Golf Course to Justin	NW County	5ft.	yes	no	Good	1.75
Lyon Blvd.	Paradise to Irvine	NW County	6 ft.	yes	no	Good	0.5
Lowell St.	Paseo del Norte. to Elena	NE County	3.5 to 4.0 ft	yes	no	Good	2.22
							22.61

Existing corridors where bike lanes are needed:

- Isleta Blvd. from Rio Bravo Blvd. to I-25
- Gun Club Rd. from Isleta Blvd. to 118th St.
- Broadway Blvd. from Woodward St. to I-25
- Rio Bravo Blvd./ Dennis Chavez Blvd. from I-25 to Paseo del Volcan

- **Northeast**

The Northeast part of the County has 6.6 miles of multi-use trails and 2-1/4 miles of bike lanes. Trails are in poor to fair condition; bike lanes are in good condition.

Tramway Blvd. has a multi-use trail on its east side. Bike lanes and a multi-use trail on the west side of the roadway are currently under construction on Eubank Blvd. from San Antonio Dr. to Paseo del Norte.

The Alameda Trail along the south side of Alameda Blvd. is planned for construction to extend it from Fourth St. to the North Diversion Channel Trail.

Tramway Trail

A multi-use trail exists in the North Domingo Baca Park and along the La Cueva and North Domingo Baca arroyos in Primrose Pointe but a gap exists in between.

Bike lanes and multi-use trails currently exist along Paseo del Norte and Tramway Blvd. in the County.

Existing corridors where bike lanes are needed:

- Alameda Blvd. from Ventura St. to Eubank Blvd.
- Eubank Blvd. from Pso del Norte to Alameda Blvd.

The following multi-use trails are called for:
- Extend Alameda Trail to Eubank Blvd.
- La Cueva Arroyo Trail to Primrose Pointe.

- **Northwest**

The Northwest part of the County has 2.6 miles of multi-use trails and 7.5 miles of bike lanes. Trails and bike lanes are in good condition except for the Paradise Hills multi-use trail which is poor to fair and does not meet width standards.

The Bosque del Rio Trail extends north of I-40 to Alameda Blvd. It connects to east-west, river crossing trails at I-40, Montaño Rd., Paseo del Norte, and Alameda Blvd. This portion of the trail is maintained by the City.

Paradise Hills Trail is Too Narrow

Corridors with bike lanes and/or trails include:
- Lyon Blvd. has bike lanes in both directions and a multi-use trail on its east side.
- A multi-use trail is provided along the south side of Paradise Hills Blvd. and bike lanes on either side.
- A multi-use trail is provided along the south side of Alameda Blvd. to Fourth St.

Existing corridors where bike lanes and/or trails are needed:
- Unser Blvd. from Universe to Paradise Blvd.
- Widen existing Paradise Blvd. Trail and extend to La Paz Dr.
- Calabacillas Arroyo Trail.
- La Orilla Rd. between Golf Course Rd. and Coors Blvd.


Bosque del Rio Trail


Uneven, cracked trail pavement

3.4 Traffic Calming

The County maintains over 800 traffic calming devices on more than 130 streets. Most of the traffic calming features are located in the Northeast and Southwest areas. Devices include:

- Speed humps or tables are the most common
- Traffic circles (intersection islands)
- Traffic diverters (right-in, right-out, or left-in restricted movements)
- Bump-outs, bulb-outs, or curb extensions

- **Southwest**
  Several neighborhoods in the South Valley have traffic calming devices installed.

- **Northeast**
  Traffic calming has been implemented in the North Albuquerque Acres neighborhoods. Traffic circles and speed humps are the most common types.

Curb Extensions along Candelaria Rd. NW

- **Northwest**
  A few streets in the Paradise Hills neighborhood have traffic devices currently installed.

Traffic Circle

Exhibit 8: Bernalillo County Traffic Calming

Area	Speed Humps	Speed Table	Right Turn Only	Mid Block Island	Intersection Island	Total	No. Streets
Southwest	341	4	1	0	0	346	72
Northwest	89	0	0	0	0	89	21
Northeast	340	0	0	8	8	356	35
East Mountain	19	0	0	1	0	20	5
Total	***789***	***4***	***1***	***9***	***8***	***811***	***133***

3.5 Village Centers

Pedestrian and bicycle facilities are to serve designated mixed use activity centers. Facilities may include:

- Upgrade crosswalks with textured surfaces, refuge islands, bump-outs, etc.
- Install, rehabilitate, and widen sidewalks
- Install bike lanes or trails
- Install pedestrian lighting
- Install bus shelters
- Plant street trees
- Complete pedestrian connections to building entrances
- Provide bike racks at businesses.

- **Southwest**

- Bridge Blvd. Corridor Village Centers:
  - Goff Blvd.
  - Old Coors Dr.
  - Five Points
  - Gateway

- Isleta Blvd. Corridor Village Centers:
  - Rio Bravo (Isleta Blvd. and Rio Bravo Blvd.)
  - Adobe Acres (Isleta Blvd., north of Gun Club Rd.)
  - Pajarito (Isleta Blvd. and Pajarito Rd.)
  - Los Padillas (Isleta Blvd. and Los Padillas Rd.)

- Sunport Station TOD (Rio Bravo Blvd. and 2nd St.)
- Mountain View (Broadway south of Rio Bravo)
- Rio Bravo Blvd. and I-25
- Coors Blvd. Corridor Village Centers:
  - Arenal Rd.
  - Blake Rd
- Unser Blvd. and Rio Bravo Blvd.

- **Northeast**

- Paseo del Norte and Eubank Blvd.
- Paseo del Norte and Tramway Blvd.

- **Northwest**

- Alameda Blvd. and 4th St.
- Paradise Hills Blvd. and Country Club Rd.

Exhibit 9: Bernalillo County Pedestrian-Bicycle Counts

Highest Intersection Counts	Year Count	Season Count	Bicycle Counts AM Total	Bicycle Counts MID Total	Bicycle Counts PM Total	Bicycle Counts Grand Total	Pedestrian Counts AM Total	Pedestrian Counts MID Total	Pedestrian Counts PM Total	Pedestrian Counts Grand Total
Alameda Blvd. and 2nd St.	2006	Summer	14	10	11	35	26	12	45	83
Alameda Blvd. and Tomas Ln.	2004	Fall	24	24	14	62	4	0	0	4
Arenal Rd. and Atrisco Dr.	2005	Spring	7	4	8	19	71	10	14	95
Arenal Rd. and Coors Blvd.	2008	Spring	12	13	5	30	23	24	35	82
Blake Rd. and Coors Blvd.	2008	Spring	9	4	9	22	15	12	9	36
Bridge Blvd. and Atrisco Dr.	2005	Winter	5	2	2	9	9	21	30	60
Bridge Blvd. and Isleta Blvd.	2007	Fall	20	25	15	60	19	22	17	58
Bridge Blvd. and La Vega Dr.	2007	Fall	15	9	24	48	26	34	26	86
Bridge Blvd. and Old Coors Rd.	2004	Fall	2	5	3	10	18	34	10	62
El Pueblo Rd. and Edith Blvd.	2005	Summer	45	23	25	93	4	0	1	5
Goff/ Arenal and Isleta Blvd.	2005	Spring	8	13	5	26	23	29	38	90
Paradise Blvd. and Davenport Dr.	2006	Fall	1	3	6	10	47	11	68	126
Paradise Blvd. and Universe Blvd.	2007	Spring	6	10	9	25	56	10	19	85
Paseo del Norte and Tramway Blvd.	2005	Spring	31	60	50	141	45	17	42	104
Rio Bravo Blvd. and Isleta Blvd.	2008	Spring	16	18	10	44	19	31	24	74
San Rafael Ave. and Tramway Blvd.	2005	Fall	81	34	69	184	74	9	9	92
Tramway Terrace Lp and Tramway Blvd.	2005	Spring	25	40	81	146	86	22	49	157

Source: MRCOG Intersection Bicycle/ Pedestrian Counts, 2005-2008

3.6 Bicycle and Pedestrian Counts

Monitoring of bicyclists and pedestrians along sidewalks, bike lanes, in crosswalks, and on multi-use trails are infrequent and spotty at best. MRCOG had conducted annual counts at major intersections but has since discontinued counts.

Bernalillo County will be installing inductive loops and video cameras in 2011 at eight locations along multi-use trails to count bicyclists and pedestrians.

The highest bicyclist counts are at the Tramway Blvd. intersections of Paseo del Norte, Tramway Terrace, and San Rafael.

The highest pedestrian counts are at Paradise Blvd. and Davenport, and Tramway and Paseo del Norte, and Tramway Terrace.

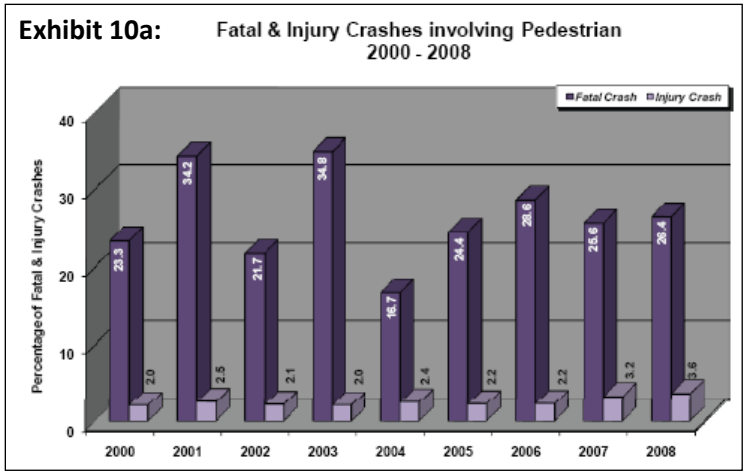
4.0 Pedestrian and Bicyclist Safety

4.1 Accidents Involving Pedestrians

New Mexico has the unfortunate distinction of having one of the highest pedestrian fatality rates in the nation, about three times the national average. Pedestrians account for between 26.5% of all highway fatalities in Bernalillo County (compared to 12% for the US). In 2009, there were 254 crashes in Bernalillo County involving pedestrians. Of the total, 11 pedestrians were killed and 210 were injured.

Fatal and injury crashes involving pedestrians were up slightly from 2000 with spikes in 2001 and 2003. Percentage of alcohol-related fatal crashes involving pedestrians were up over 2000, while the percentage of injury crashes remained steady. For 2008, pedestrian crashes were highest in the late afternoons on Fridays with fatalities highest on Saturdays. Pedestrian crashes were also highest in Spring and Fall. Most drivers involved in pedestrian crashes are male and in their 20s.

Exhibit 10a: Fatal & Injury Crashes involving Pedestrian 2000 - 2008



Source: MRCOG Albuquerque Metropolitan Crash Data, 2000-08

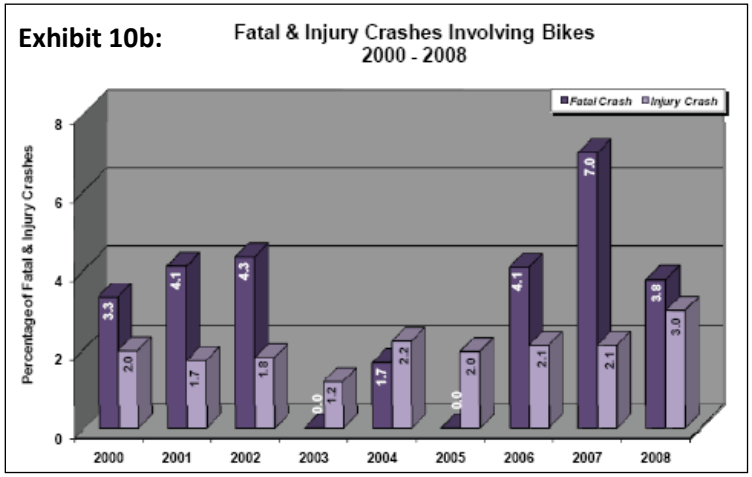
Intersections within the unincorporated County with recently recorded pedestrian crashes are:

- Coors Blvd. and Bridge Blvd.
- Coors Blvd. and Arenal Rd.
- Coors Blvd. and Dennis Chavez Blvd.
- Coors Blvd. and Gun Club Rd.
- Coors Blvd. and Don Felipe Rd.
- Isleta Blvd. and Blake Rd.

4.2 Accidents Involving Bicycles

In 2009, there were 224 crashes involving bicyclists in Bernalillo County. Of the total, 1 bicyclist was killed and 167 were injured. The percentage of fatal crashes involving bikes dropped during the middle part of the decade then spiked in 2007. Injuries are up over 2000. For 2008, summer months are highest for crashes as would be expected. Most crashes occurred in late afternoons on Wednesdays and Fridays. As with pedestrian crashes, most drivers involved are males in their 20s.

Exhibit 10b: Fatal & Injury Crashes Involving Bikes 2000 - 2008



Source: MRCOG Albuquerque Metropolitan Crash Data, 2000-08

Intersections within the unincorporated County with recorded bicycle crashes include:

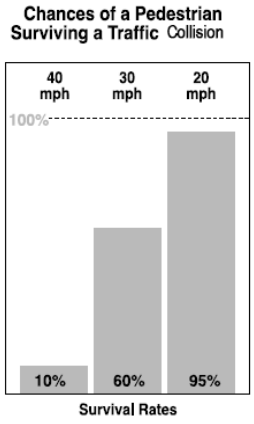
- El Pueblo Rd. and Edith Blvd.
- Bridge Blvd. and Coors Blvd.
- Bridge Blvd. and Old Coors Dr.
- Bridge Blvd. and Atrisco Dr.
- Gun Club Rd. and Coors Blvd.
- Gun Club Rd. and Isleta Blvd.
- Paradise Hills and Lyon Blvd. (Unser Blvd.)
- Paseo del Norte and Tramway Blvd.

4.3 Pedestrian Crash Types

1. Crossing mid-block, no crosswalk
   Conflicts: Pedestrians dart into high speed lanes; Vehicles fail to see, slow for pedestrians in time.
   - ✓ Under 12,000 AWDT, there is no increase in crashes at crossings without markings.

2. Crossing mid-block at crosswalk
   Conflicts: High speed vehicles fail to slow or stop for pedestrians at crossings without medians, signs, or signals.
   - ✓ Over 12,000 AWDT, a marked crosswalk will reduce crashes.
   - ✓ Over 15,000 AWDT, a pedestrian median will further reduce crashes.
   - ✓ Over 40 mph, pedestrian signals are also required.

3. Crossing at a signalized intersection
   Conflicts: Vehicles run light, fail to slow or stop, or turn into pedestrians and bicyclists on roadways without bike lanes and poorly designed, signaled crosswalks.



4. Night time crossing
   Conflicts: Vehicles fail to see pedestrians and bicyclists in time at poorly lighted intersections.
   50% of pedestrian crashes happen at night.

5. Disabled or Parked Vehicle
   Conflicts: Vehicles fail to slow, go around stopped vehicle on roadways without parking lane or shoulder.

6. Absence of sidewalk, narrow shoulder
   Walking along roadways accounts for 10 to 15% of all pedestrian crashes; especially, in rural areas which lack sidewalks.
   Conflicts: Vehicles fail to slow, watch for, and/ or go around pedestrians and bicyclists along the road side.

7. Work Zones
   Conflicts: Vehicles don't stop, go around workers, especially if not properly signed or diverted.

8. School Zones
   Conflicts: Vehicles fail to slow, stop, watch for children at drop-off locations; Children don't cross at the crosswalk.

9. Driveways
   Most sidewalk crashes occur at driveways.
   Conflicts: Vehicles backing up fail to watch for pedestrians and bicyclists.

10. Bus Stops
    Conflicts: Vehicle fails to slow, stop for bus; visibility of pedestrians blocked by bus.

4.4 Pedestrian Friendly Roadways and Intersections

Roadways which provide the following features are the safest for pedestrians and bicyclists.

1. **Install shoulders or trails along rural roadways and sidewalks along urban roadways.**
   Paved shoulders reduce pedestrian crashes by 70%. Sidewalks reduce pedestrian crashes by 88%
   Sidewalks and shoulders should be 6 ft. in width. Sidewalks require a 4 ft. buffer from the street and trails require a 10 ft. buffer. Sidewalks should be built on both sides of the street and gaps should be connected.

2. **Ensure all sidewalks are accessible.**
   Poles, signs, trees, utility boxes should all be re-located in the buffer or "furniture zone." ADA requires ramps, drive pads and sidewalks cannot exceed a 2% slope. A 48-inch level area is required for all ramps. Individual ramps should be directed towards each crosswalk rather than combined at a diagonal angle to the intersection.

3. **Ensure all intersections are well lit.**
   Lighting reduces pedestrian fatalities by 42% at midblock locations and 54% at intersections.

4. **Install flashing beacons or signals at all mid-block and all school crosswalks.**
   Flashing beacons increased rates of motorists yielding to pedestrians from 20 – 80%
   Beacons are warranted at schools and at 20 pedestrians per hour. Signals are warranted at 90+ pedestrians per hour.

5. **Install pedestrian activated walk signals**
   Pedestrian crashes were reduced by 70% by converting from permissive left turns to protected only left turns. In one study, pedestrian crashes were also reduced by 25% after countdown signals were installed.
   Push buttons should be located near pedestrians and bicyclists and at the proper height for all users. Pedestrian signal cycles should be short and set to accommodate elderly and children. Some locations should give pedestrians a walk light at every cycle.

6. **Ensure all crosswalks are located and marked correctly.**
   Bar crosswalk markings are more visible to drivers than line markings.
   Crosswalks should be placed at the narrowest point of the intersection and located on all sides. Right angles can ensure visibility. Move stop bars further back from the crosswalk. Consider striping "bike boxes" at all major intersections.

7. **Narrow intersections such as with smaller turning radii or curb extensions.**
   Smaller curb radii reduce the crossing distance making them safer for pedestrians.

8. **Provide refuge islands**
   Raised medians and island reduce pedestrian crashes at marked crosswalks by 46% and at unmarked crosswalks by 39%,
   Islands and refuges can break up crossings to make them safer. "Pelican" or two-stage crossings are particularly effective.

9. **Make transit stops safe for pedestrians.**
   Far side stops ensures pedestrians can cross more safely and bus driver can safely pull forward. Bus bulb-outs (curb extensions) are preferred to bus pull-outs. ADA requires a 5 ft. by 8 ft. landing.

10. **Properly plan for construction zones**
    Source: Creating a Pedestrian Safety Action Plan, FWHA, 2009

5.0 Healthy Streets and Trails

5.1 Health Effects of Transportation System

The way our communities and transportation system are planned and built often negatively impacts the health of residents. Sprawl, lack of street connectivity, air pollution, and absence of pedestrian and bicycle facilities all contribute to poor health in our communities.

- ✓ Obesity. According to the Centers for Disease Control and Prevention (CDC), 30 percent of U.S. adults age 20 and older are obese, and approximately 65 percent of Americans weigh more than is healthful. Today, one in five children and one in three teens is overweight or at risk of becoming overweight.

- ✓ Heart Disease. The leading cause of death for women and men in the United States is heart disease, according to the American Heart Association. In 2003, a total of 685,089 people died of heart disease, accounting for 28 percent of all U.S. deaths.

- ✓ Diabetes. One of every ten health care dollars spent in the United States goes toward diabetes and its complications. Between 1994 and 2004, the prevalence of diabetes increased more than 50 percent.

- ✓ Respiratory Problems. Many studies have shown links between air pollution and health effects. Increases in air pollution have been linked to decreases in lung function and increases in heart attacks. High levels of air pollution directly affect people with asthma and other types of lung or heart disease. The elderly and children are especially vulnerable to the effects of air pollution.

All of these health problems are linked to environmental factors. Research conducted by UCLA has correlated the walkability of a neighborhood with increased walking by residents and found that the neighborhood environment – including the availability of parks – influences individual health behaviors.

5.2 Prescription Trails

The Prescription Trails Program (Rx Trails) developed a prescription tool and walking guide to increase walking and wheelchair rolling on suggested routes, targeting and promoting healthy lifestyle for families. Sedentary lifestyles contribute significantly to chronic disease and poor health outcomes. Rx Trails connects health care providers and their patients to walkable sites in the South Valley. The outcome is a healthier, happier society.

Prescription Trails Program major partners include: NM Health Care Takes on Diabetes, National Park Service, Blue Cross-Blue Shield of New Mexico, City of Albuquerque, New Mexico State Parks, Albuquerque Alliance for Active Living and Bernalillo County Open Space.

Prescription Rx Walking Trails are at the following Bernalillo County Open Space Properties:

- Durand
- Gutierrez-Hubbell House
- Pajarito
- Rio Bravo
- Sanchez Farm
- Valle del Bosque

6.0 Safe Routes to School

The New Mexico Safe Routes to School program supports walking and bicycling as viable and healthy transportation options for children and families on their school journeys. According to their Handbook:

"Thirty years ago, about one half of all schoolchildren walked or bicycled to or from school, including 87 percent of those living within one mile of their school. Today fewer than 15 percent of all children and adolescents use active modes of transportation, such as walking or bicycling.

In a nationwide survey of parents conducted in 2004, 30 percent indicated traffic danger as a barrier to allowing their children to walk or bike to school. Twenty to 25 percent of morning rush hour traffic is attributable to parents driving their children to school.

Nationally, pedestrian injury is the second leading cause of unintentional injury death among children ages 5-14. Motor vehicle crashes in which children are passengers are the leading cause of death for school-age children.

In New Mexico, obesity affects 22 percent of adults and nearly 17 percent of youths ages 10-17. This proportion for New Mexico's youth is the tenth highest in the nation.

Thirty-nine percent of students had not participated in recommended levels of either moderate or vigorous physical activity. No physical activity was reported by 12.1 percent of students.

Regular physical activity in childhood and adolescence:

- Improves strength and endurance
- Helps build strong bones and muscles
- Helps control weight
- Reduces anxiety and stress and increases self-esteem
- May improve blood pressure and cholesterol levels.

Walking to school is associated with higher overall physical activity throughout the day.

Research studies also show that regular participation in physical activity is associated with improved academic performance."

Within unincorporated Bernalillo County, there are 10 elementary schools in the Southwest area, two in the Northwest, two in the Northeast, and two elementary schools in the East Mountains where safe school routes need to be evaluated.

Ditch-bank trail to Valle Vista Elementary School, Albuquerque

Source: NMDOT Safe Routes to School Handbook, 2008

7.0 Complete Streets and Trails

All new roadway projects in Bernalillo County are to be designed to accommodate pedestrians and bicyclists as well as motor vehicles. How well streets are designed for multiple users, referred to as "complete streets," will depend on whether located in urban or rural environments, available rights-of-way, adjoining land use, roadway classification, traffic volume, speed, and other factors. For example, slower speed local streets may be shared use facilities, especially in rural environments or where traffic calming facilities have been installed, while higher speed collector and arterial streets should provide separate pedestrian and bicycle facilities. This section describes various types of street design for pedestrians and bicyclists, to be incorporated into the County's street standards, as referenced in the subdivision ordinance.

7.1 Rural Street Design

Paseo Del Norte/ North Albuquerque Acres Sector Development Plan calls for rural street standards that include pedestrian, bicycle, and equestrian facilities. A similar standard should be applied in the more rural parts of the North and South Valleys.

- **Narrow Rights-of-Way**

In the North and South Valleys, existing rights-of-way (ROW) will allow sidewalks when curb/gutter exists:

- >40 ft. ROW – sidewalks, no buffer on both sides of the roadway
- 30 ft. – 40 ft. ROW – sidewalk, no buffer on one side
- <30 ft. – no sidewalks; 4 ft. shoulders if no curb/gutter
- Bikes share the roadway rather than have a separate bike lane

- Alternative sidewalk materials: Stained concrete, asphalt, or compacted, stabilized crushed aggregate sidewalks.

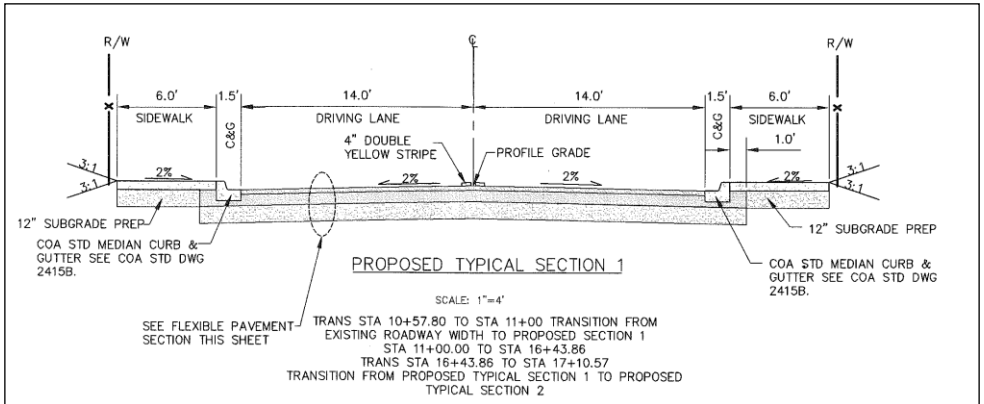
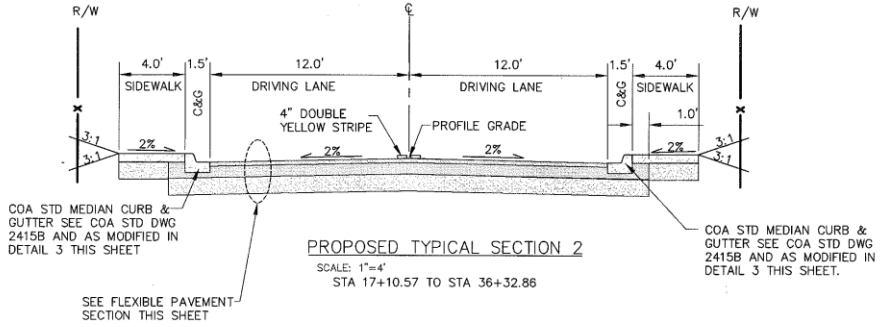


Exhibit 11: Existing, Narrow Rights-of-Way Roadway Examples: 35 ft. to 43 ft.



New Street Standards Pending

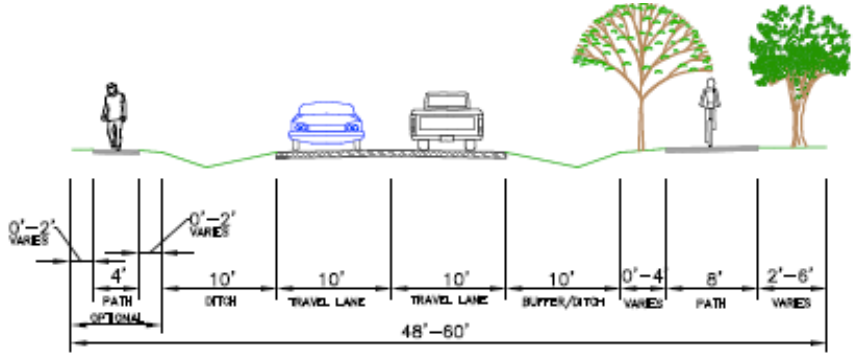


Exhibit 12a: County Standard Section for Rural Local Streets

- **Rural Local and Collector Roadways:**

For new roadways, a minimum right-of-way of 50 feet wide w/o curb and gutter; 40 feet wide with rollover curb are required:

- 2 narrow travel lanes, 10 – 12 feet wide
- Soft surface trail in place of sidewalk – 5 feet wide, each side
- Drainage swale, no curb and gutter – 10 feet wide, each side

7.2 Urban Street Design

Areas of the County designated 'Established Urban' and 'Developing Urban' in the *Albuquerque/ Bernalillo County Comprehensive Plan* will apply urban street design standards. 'Semi-Urban' areas may apply either rural or urban standards.

- **Local Streets (Residential and Commercial):**

Right-of-way minimum 50-60 feet wide:

- 2 travel lanes, 12 feet wide each
- Wide shoulders for bicycles for minor local
- 5 ½ ft. bike lanes for major local, on each side
- 5 foot wide sidewalks with 5 foot setback, on each side
- Optional: 8 ft. wide parking lanes

- **Collector Streets:**

Right-of-way minimum 74 feet wide:

- 2 travel lanes, 12 feet wide each
- 1 center turn lane or median 12 - 14 feet wide
- 6 feet wide bicycle lane, on each side
- 5 feet wide sidewalk with 5 foot setback, on each side
- Optional: 8 ft. wide parking lanes

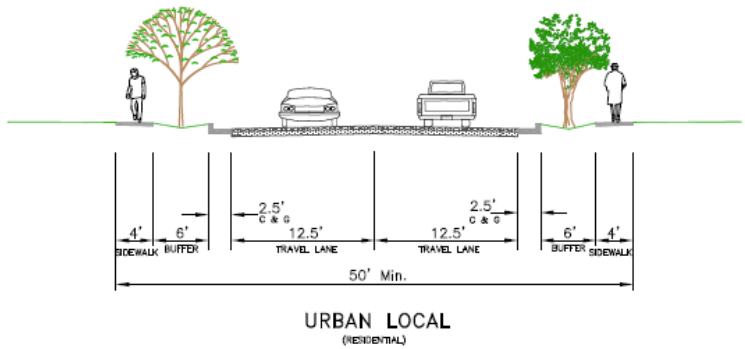


Exhibit 12b: County Standard Section for Urban Local Streets

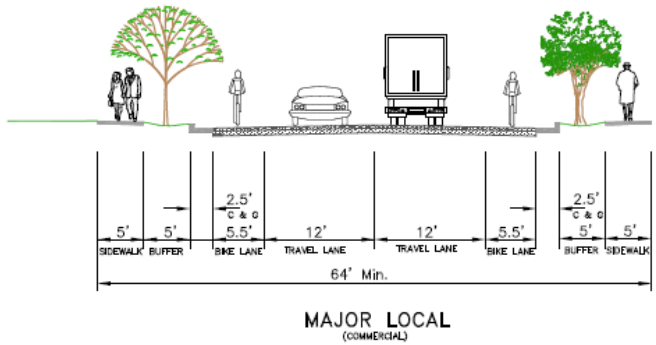


Exhibit 12c: County Standard Section for Major Local Streets

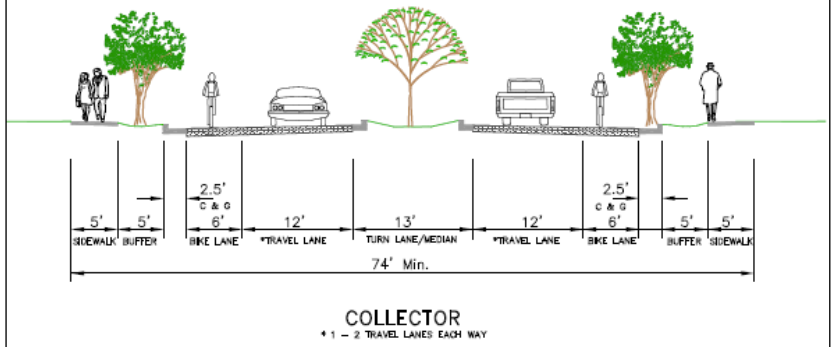


Exhibit 12d: County Standard Section for Collector Streets

Minor Arterial Streets:

Right-of-way minimum 100 feet wide:

- 4 travel lanes, 12 feet wide each
- Median 15 feet wide
- 6 feet wide bicycle lanes, on each side
- 5 feet wide sidewalk with 5 foot setback, on each side

- **Principal Arterial Streets:**

Right-of-way minimum 124 to 156 feet wide:

- 4 to 6 travel lanes, 12 feet wide each
- Median 13 ft. wide+
- 7 ft. wide bike lanes, both sides where speeds exceed 40 MPH
- 5 feet wide sidewalk with 5 foot setback, on each side

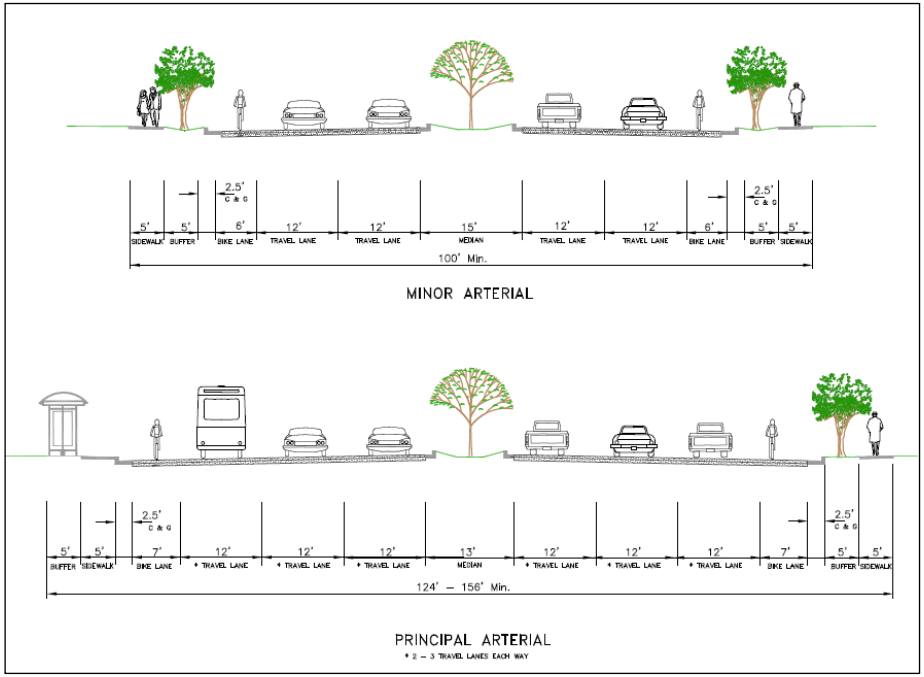


Exhibit 12e: County Standard Section for Arterial Streets

7.3 Multi-Use Trails

Shared-use paths/trails are not intended to replace on-street bikeways (e.g. bike lanes and paved shoulders). All paths shall be 12 ft. wide unless right-of-way constraints require a reduction in width to no less than 10 ft. Additional width may be required for curves with inadequate sight distances or for steep hills. Paths may be constructed of either asphalt (preferred) or concrete. County standards for grade, drainage, crossings, clearance, and signage also apply.

Unlike paved, shared-use paths/trails, unpaved trail standards vary greatly; "one-size-fits-all" design standards are inadequate for several reasons. First, unpaved trails may serve various combinations of users, including walkers, hikers, joggers, equestrians, mountain bikers and off-highway vehicles. Second, unpaved trails may vary drastically according to purpose (e.g. accessibility, transportation, technical challenge). Lastly, unpaved trails may be located in varied settings, including natural open space, atop irrigation ditch banks and abandoned railbeds, and adjacent to paved, shared-use paths within urban trail corridors.

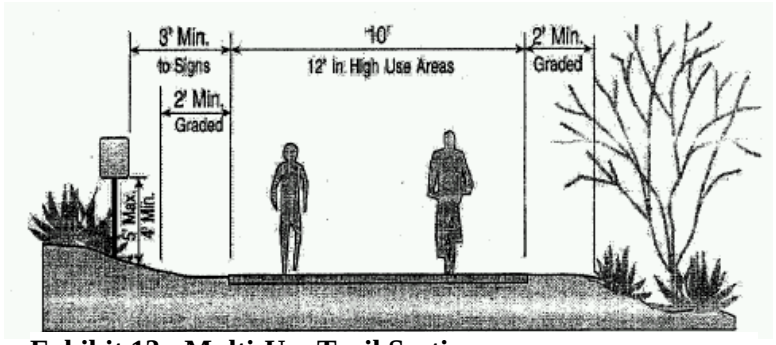


Exhibit 13: Multi-Use Trail Section

Source: City of Albuquerque DPM

7.4 Intersections

All major signalized and un-signalized intersections, located on collector and arterial streets, shall be provided striped crosswalks. Crosswalk striping shall be the blocked type as preferred by the County Engineer. Pavement treatment may be used for crosswalks in Village Centers. Crosswalks shall be striped to the same width as the sidewalks for the streets which they connect.

Where crosswalks are longer than 40 feet, a refuge island and/ or bulb-outs shall be provided, to narrow the travel lane for pedestrian safety as long as it does not block bicycle lanes. Intersections shall be well-lit and provided appropriate signage.

Mid-block crosswalks shall be provided for schools and other community facilities but shall have pedestrian warning flashers, beacons, or signals when located on collector and minor arterial streets. Otherwise appropriate pedestrian crossing signage shall be installed. Where refuge islands are used, crossings shall be staggered between each side of the street. Pedestrian crossing of principal arterial streets at mid-block shall require construction of under- or overpass facilities.

Exhibit 14: Crosswalk Types

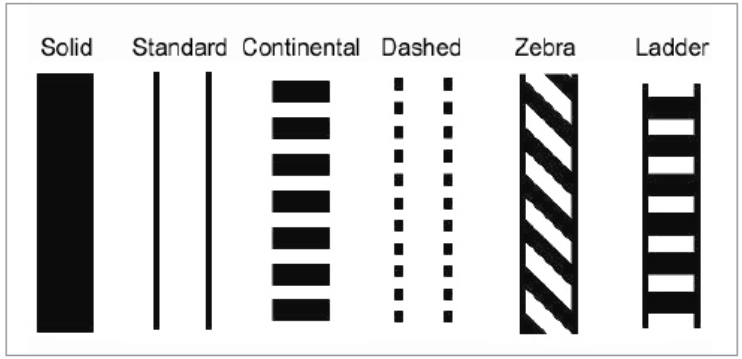


Exhibit 15: School Pedestrian Crossings:

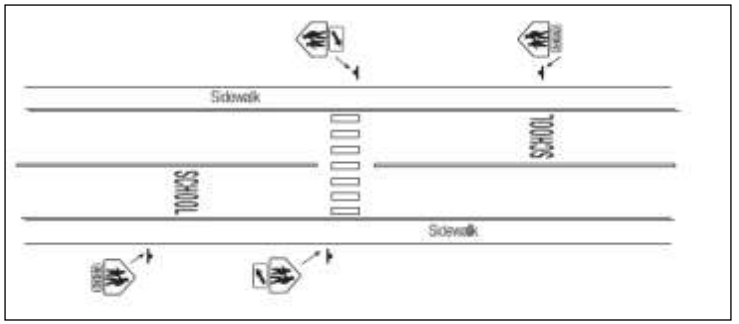


Exhibit 16: Mid Block Pedestrian Crossing:

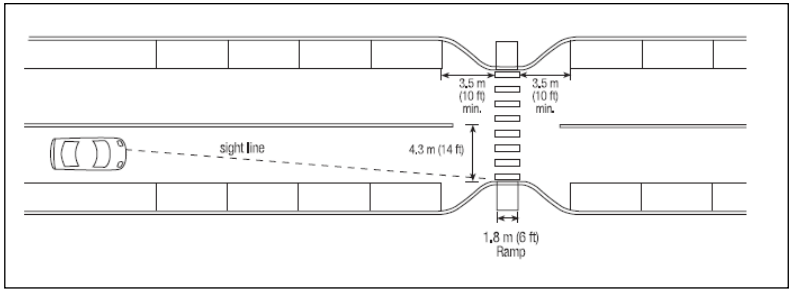
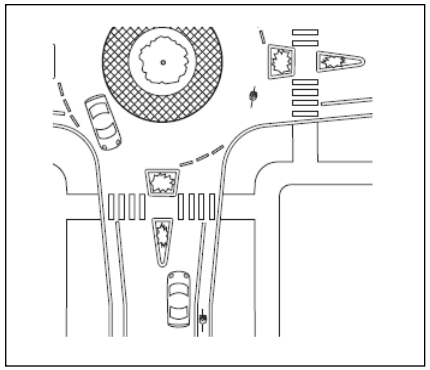


Exhibit 17: Roundabout Pedestrian Crossing:

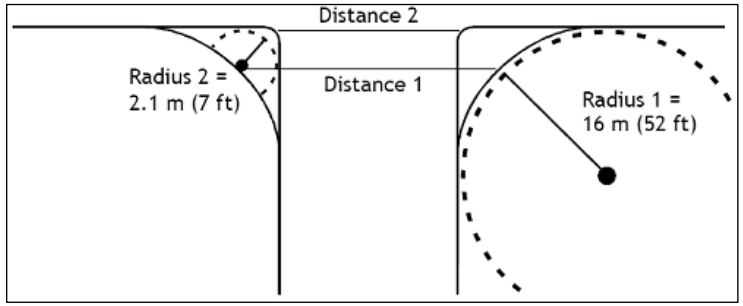


7.5 Turning Radii

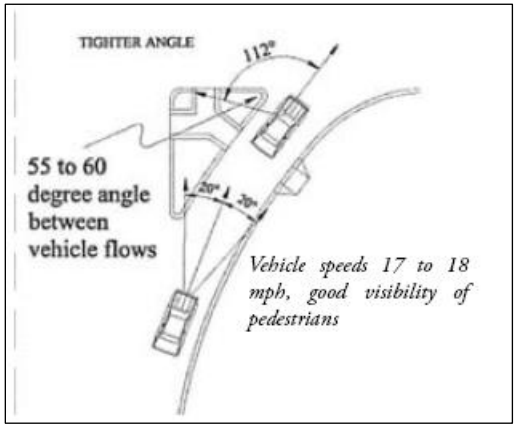
Minimum acceptable turning radii are shown in the table below. Tighter radii may be approved by the County Engineer to make streets more pedestrian friendly.

Exhibit 18: County Minimum Turning Radii Standards

	Principal Arterial	Minor Arterial	Collector	Major Local
Principal Arterial	varies	35 ft.	35 ft.	30 ft.
Minor Arterial	35 ft.	35 ft.	30 ft.	30 ft.
Collector	35 ft.	30 ft.	25 ft.	25 ft.
Major Local	30 ft.	30 ft.	25 ft.	20 ft.
Local Residential	30 ft.	30 ft.	30 ft.	30 ft.



Examples of Tighter Curb Radii



7.6 Accessibility

The Americans with Disabilities Act was enacted in 1990 to ensure people with disabilities have equal opportunities and access to public facilities as those who do not have disabilities.

All new and existing sidewalks which are to be constructed or reconstructed shall be designed to enable persons with disabilities using wheelchairs to travel freely and without assistance by integrating a curb ramp into the sidewalk that blends with street and driveway crosswalks at a common level.

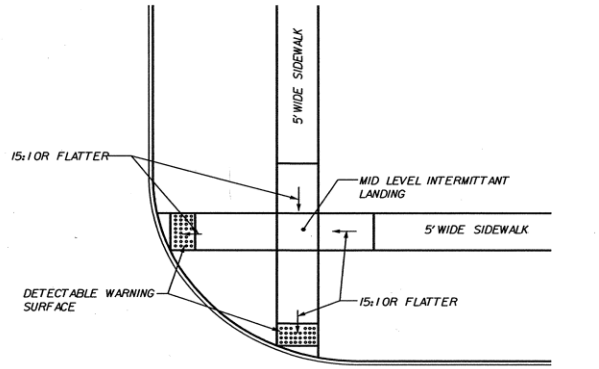


Exhibit 20: ADA Compliant Intersection Ramp

7.7 Bus Stops and Shelters

Along Transit Corridors, an eight (8) foot by 12 foot concrete pad shall be provided in the setback and sidewalk areas of the public right-of-way, at designated transit stops for bus benches and shelters to be constructed to Albuquerque Ride or other transit provider standards. Sidewalks shall be installed in front of the bus shelter to the curb and shall be at least six (6) feet wide. Bus stops and shelters shall be placed on either side of the street served by transit ahead of an intersection and spaced at least 1,200 feet apart. Bus bays are recommended only for two-lane roadways. An additional 12 feet of right-of-way is needed for a pull-out bay. Bus stops shall be well-lit and provided appropriate signage.

Exhibit 21: Bus Shelter Example

7.8 Village Centers and Transit Oriented Development (TOD)

Mixed use developments are designed to be more pedestrian friendly than other developments. Standards are from County adopted plans.

Wider Sidewalks: 9 - 10 feet

Parking:

- Shared parking is permitted if within 1,320 feet of another parking facility
- Off-street surface parking shall be located at the rear and sides of a building relative to its primary street frontage.
- Parking is not permitted between a building and the street, with the exception of retail uses of over 80,000 square feet, provided a minimum of 50% of street frontage has building frontage
- Parking areas at the side of a building shall have a street frontage of not more than 120 lineal feet, screened from view
- No single parking area shall exceed 150 spaces unless divided into smaller sub-areas by a building, internal landscaped street or shaded pedestrian way with trees planted at < 30 feet on center.
- Loading areas shall be separated from automobile parking and screened from view.
- Where practical, water harvesting areas for surface runoff shall be provided in parking lots.
- Bicycle parking must be provided in easily-accessible locations from the street and visible from storefronts or office building front doors. One bicycle space shall be provided for every 10,000 square feet of building net floor area.

Building Entrances:

- Building entrances shall be oriented to the primary street.
- Buildings adjacent to the transit platform, transit station, a transit street, or a major pedestrian ways, shall orient building entries towards transit and pedestrian facilities.
- Pedestrian ways shall be provided from the building entry to the transit platform, transit station, transit-street, or major pedestrian ways.

Lighting:

- Outdoor light fixtures exceeding 12 feet in height shall be shielded outdoor light fixtures so that light is directed downward.
- Free standing light fixtures shall not exceed 15 feet.
- Outdoor walkways shall be lighted.

7.9 Traffic Calming

The design of streets should take into consideration various calming, crime prevention, and safety techniques in residential neighborhoods, near schools, and at intersections or areas with heavier pedestrian activity. Methods may include but are not limited to:

- Mid-Block Islands
- Chokers
- Traffic Circles
- Speed Tables
- Diverters/Barriers
- Chicanes

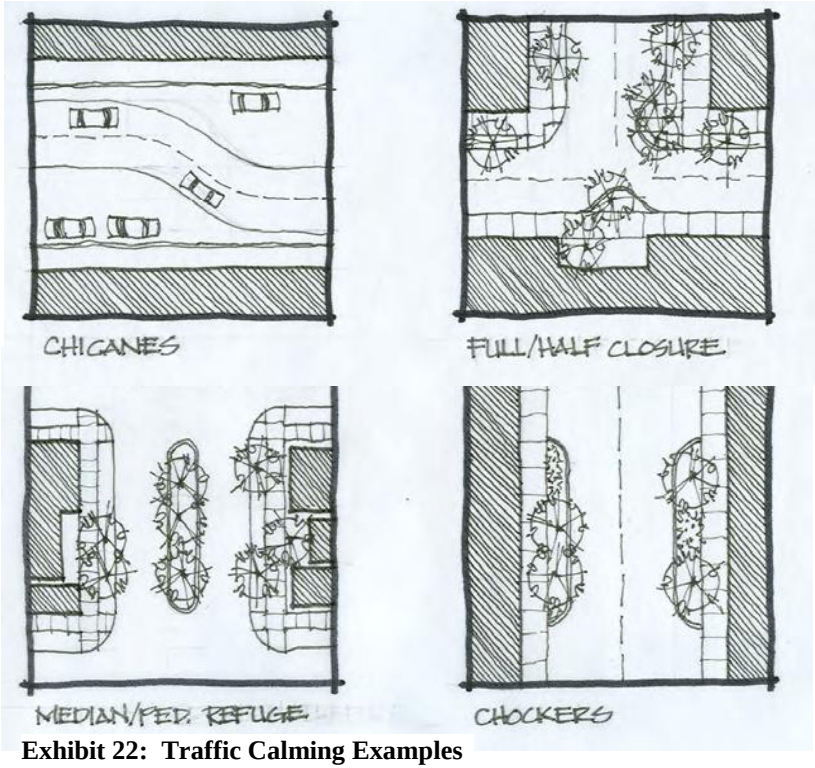


Exhibit 22: Traffic Calming Examples

7.10 Crime Prevention through Environmental Design (CPTED)

Natural Access Control

- Limit access without completely disconnecting the subdivision from adjacent subdivisions.
- Design streets to discourage cut-through or high-speed traffic.
- Install plantings, and architectural design features such as a columned gateway to guide visitors to desired entrances and away from private areas.
- Install walkways in locations safe for pedestrians, and use them to define pedestrian bounds.

Natural Surveillance

- Avoid landscaping that might create blind spots or hiding places.
- Locate open green spaces and recreational areas so that they are visible from nearby homes and streets.
- Use pedestrian scale street lighting in high pedestrian traffic areas to help people recognize potential threats at night.

Territorial Reinforcement

- Design lots, streets, and houses to encourage interaction between neighbors.
- Accentuate entrances with the subdivision name, different paving material, changes in street elevation, architectural, and landscape design.
- Define property lines with post and pillar fencing, gates, and planting to direct pedestrian traffic to desired points of access only.

Maintenance

- Maintain all common areas to very high standards, including entrances, and right-of-ways.

7.11 Pedestrian Access in Developments

Commercial developments and subdivisions shall include a pedestrian and bicycling element to provide sidewalks, walkways, bike lanes, and trails. Pedestrian and bicycle access shall be provided to link residences with nearby schools, parks, community centers, and retail areas. Loop streets are preferable to cul-de-sacs. Where cul-de-sacs do exist, pedestrian connections shall be provided to adjacent roadways. Right-of-way shall be dedicated for trails and bike lanes designated on the LRBS Map and shall be constructed as part of the required improvements.

- Pedestrian access routes or connections through stub streets or cul-de-sacs shall contain a 6 foot path in a 12 to 18 foot wide easement and shall prevent vehicular entry.
- Pedestrian connections shall be provided from the public sidewalks, bus stops, and parking areas to building entrances as required by ADA Title III.
- Buildings should front onto the street to promote pedestrian activity. Parking should be placed behind or on the side of the building.
- Parking lots with 150 or more spaces should be divided into separate areas with walkways and landscaped areas in between aisles that are at least 10 feet in width.
- Parking should be shared between nearby businesses especially those that have different hours of operation or underused lots.
- To encourage walking instead of driving between uses on the development site, sidewalks should connect those uses to adjacent ones.
- Shared access easements can reduce the number of driveways and make sidewalks and bike lanes far safer.

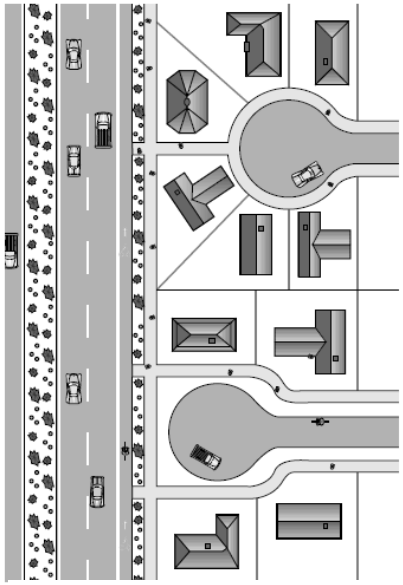


Exhibit 23: Pedestrian connections through cul-de-sac

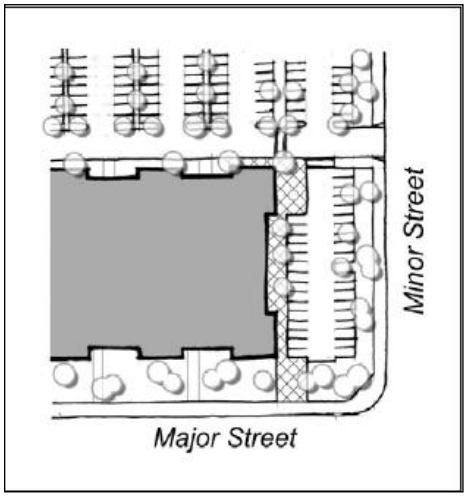


Exhibit 24: Pedestrian access from parking and sidewalk

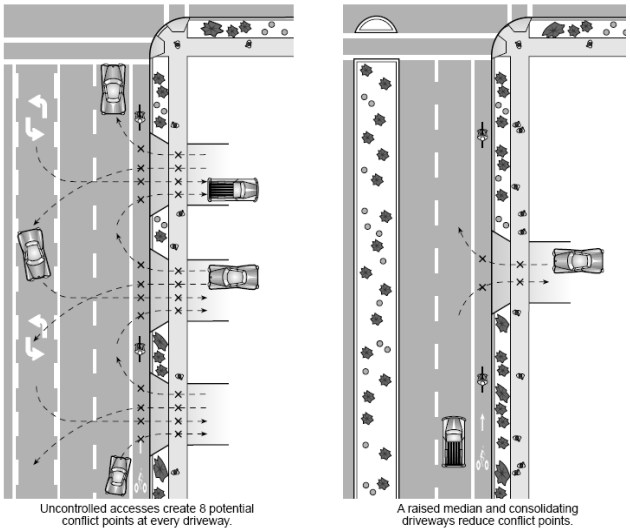


Exhibit 25: Shared driveways between lots are safer

7.12 Street Trees

Street trees can provide many health and safety benefits; chiefly, they promote pedestrian activity by providing shade, blocking wind, and buffering from vehicles. Street trees are recognized as a significant off-set for carbon emissions. In addition, trees:

- Reduce and clean storm water run-off
- Stabilize soil
- Reduce dust in the air
- Reduce temperatures which decreases the heat island effect
- Absorb air pollutants
- Reduce energy costs for homes and businesses
- Increase property values.

In choosing street trees, consideration is given to its height and canopy at maturity, water use, hardiness, pollen, and any ornamental features such as flowering and fall color.

Source: City of Albuquerque sustainability website, 2009

A five foot setback buffer is required on all urban roadways between the back of the curb and the sidewalk. Street trees planted in the buffer, maintained by the property owner, may count towards the County's 10 to 20 foot wide landscaping requirement for commercial development.

Water harvesting swales are encouraged for use by landscaping in the setback buffer. Regularly spaced curb inlets or drains shall be used to direct stormwater from the gutter into the swale.

The County maintains median -landscaping along the following corridors:

- Bridge Blvd.
- Rio Bravo Blvd.
- Isleta Blvd.
- Alameda Blvd.

Medians should be inverted to allow for rainwater harvesting of landscaping.

Exhibit 26: Bio-swale in Landscape Buffer

8.0 Action Plan

The Action Plan contains strategies for implementing the County's pedestrian and bicyclist facility policies through capital projects, review and approval of private development, traffic impact studies, changes to County ordinances, community outreach and education and coordination with the County's partner agencies.

8.1 Capital Improvements Plan

The region's *Long Range Bikeways System Map* provides a basis for identifying future County pedestrian and bicyclist facility improvements (see Exhibit 27 below).

Funding Sources:

- **Transportation Enhancement Activities (TEAs).** The law provides a specific list of activities that are eligible for Surface Transportation Enhancement (STPE) projects and including the "provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists, and the "preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails)." *23 USC Section 109 (a)(35)*

- **Congestion Mitigation and Air Quality Improvement Program (CMAQ)** funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as maps, brochures, and public service announcements) related to safe bicycle use. *23 USC Section 217 (a)*

- **Recreational Trails Program** funds may be used for all kinds of trail projects. Of the funds apportioned to a State, 30 percent must be used for motorized trail uses, 30 percent for non-motorized trail uses, and 40 percent for diverse trail uses (any combination). *23 USC Section 206*

- **National Scenic Byways Program** funds may be used for "construction along a scenic byway of a facility for pedestrians and bicyclists." *23 USC Section 162 (c)(4)*

- **Job Access and Reverse Commute Grants** are available to support projects, including bicycle-related services, designed to transport welfare recipients and eligible low-income individuals to and from employment. *TEA-21 Section 3037*

- **State and Community Highway Safety Grants** funded by the Section 402 formula grant program. A State is eligible for these grants by submitting a Performance plan (establishing goals and performance measures for improving highway safety) and a Highway Safety Plan (describing activities to achieve those goals). *23 USC Section 402*

- **Safe Routes to School**
  SRTS programs use a comprehensive "5 E" approach that includes the following elements:
  - **Education** — Pedestrian and bicycle safety training for children and parents, and driver education targeting parents, neighbors and others in the community.
  - **Encouragement** — Fun, educational and motivational activities that promote walking and bicycling.
  - **Enforcement** — Legal enforcement of traffic laws and activities that help change unsafe behaviors of drivers, bicyclists and pedestrians.

- **Engineering** — Improvements to infrastructure, such as streets, sidewalks, trails, and crosswalks, that facilitate safe walking and bicycling.
- **Evaluation** — On-going information-gathering to determine what is working and what is not.

The program funds $15,000 to prepare a Safe Routes to School Action Plan and up to $250,000 per jurisdiction to make improvements.

General Obligation (GO) Bonds

Bernalillo County Code, 2-241: 5% Trails & Bikeways Funding Projects in the road and drainage capital improvement general obligation bond program shall include an amount for trails and bikeways of not less than five percent of the total program funding, exclusive of any trails and bikeways G.O. bond projects. Sidewalk and bike lane projects should be funded as part of roadway bonds.

Pedestrian/ Bicycle Facility Prioritization Criteria

Capital improvement (CIP) projects will be scored using criteria developed by the Public Works CIP Committee. All capital projects must be approved by the Bernalillo County Commission before any design or construction work may commence.

Installing pedestrian and bicycle facilities throughout the county will be a long, expensive process. Projects can be prioritized by area of need. Tier 1 projects are those collector streets or local streets that serve community facilities, parks, and schools. Tier 2 projects are local streets that provide connectivity. Corridor projects are arterial roadways in which bicycle-pedestrian projects are likely to be federally funded.

Project costs reflect only the cost for sidewalk, bike lane, or trail improvements. Sidewalk costs assume concrete construction but some projects may be less because they will be an asphalt or soft surface type walkway. They do not include the costs for other roadway improvements such as storm drainage, curb and gutter, and pavement rehabilitation or new construction. They do not include any right-of-way costs, engineering design, or environmental clearance.

84 pedestrian and bicyclist facility improvement projects have been identified totaling $30 million for three sub-areas of the County:

- New Collector Sidewalks– 16 tier 1 projects (not associated with schools, parks, community centers, transit centers)
- Corridor Bicycle/ Pedestrian Facilities – 12 projects
- Sidewalk Repair and Sidewalk Completion – 2 projects
- New Multi-Use Trails – 6 projects
- Extend Multi-Use Trails – 4 projects
- Transit Station Bicycle/ Pedestrian Facilities – 2 projects
- Parks, Comm. Center Bicycle/ Pedestrian Facilities – 7 projects
- School Safety Sidewalks/ Bikeways – 15 projects
- New Local Sidewalks – 20 tier 2 projects.

Exhibit 27a: Bernalillo County Pedestrian and Bicycle Facility Projects – Southwest Area						
Facility	**Type**	**Description**	**Schools**	**Funding**	**Cost**	**Priority**
Atrisco Dr.	New Sidewalks, crosswalks, lighting	Arenal Rd. to Bridge Blvd.	Atrisco ES	GO, SRTS	$ 408,940	Tier 1
Goff Blvd.	New Sidewalks, crosswalk, lighting	Bridge Blvd. to Sunset Rd.		GO Bonds	$ 241,480	Tier 1
Sunset Rd.	New Sidewalks, crosswalks, lighting	Central Ave. to Arenal Rd.		GO, SRTS	$ 542,460	Tier 1
Tapia Blvd.	New Sidewalks crosswalk, lighting	Bridge Blvd. and Blake Rd.		GO Bonds	$ 674,740	Tier 1
Arenal Rd.	New Sidewalks crosswalk, lighting	Tapia Blvd. to Isleta Blvd.		GO Bonds	$ 160,160	Tier 1
Blake Rd.	Sidewalks, Bike lanes, crosswalks	Barcelona Pl. to La Vega Dr.	Navajo ES	GO, SRTS	$ 893,240	Tier 1
Barcelona Rd.	New Sidewalks, crosswalks, lighting	Condershire Dr. to La Vega Dr.	Barcelona, Navajo ES	GO, SRTS	$ 642,500	Tier 1
Old Coors Dr.	New Sidewalks crosswalk, lighting	Coors Blvd. to Bridge Blvd.		GO Bonds	$ 282,320	Tier 1
El Centro Familiar	Sidewalks, trail, crosswalks, lighting	Citation, Sanford	Health Commons, Kit Carson	GO, SRTS	$ 397,320	Tier 1
Sunset Gardens Rd.	Sidewalks, crosswalks, lighting	Arenal Ditch to Sunset Rd.	Valle Vista ES, Bosque Park	GO, SRTS	$ 80,620	Tier 1
Del Rio Rd./Violet Rd.	Sidewalks, crosswalks, lighting	Rio Bravo Blvd. to Blake Rd.	Adobe Acres ES	GO, SRTS	$ 402,020	Tier 1
Junta Rd./Sanchez Rd.	Sidewalks, crosswalks, lighting	Rio Bravo Blvd. to Blake Rd.	Barcelona ES	GO, SRTS	$ 212,160	Tier 1
Larazolo Rd./Five Pts	New Sidewalks crosswalk, lighting	Atrisco Dr. to Goff Blvd.	SV Multi-Purpose Center	GO Bonds	$ 170,080	Tier 1
Amalia Rd.	New Sidewalks crosswalk, lighting	Amole del Norte Trail to Atrisco Dr.		GO Bonds	$ 333,540	Tier 2
Conita Real	New Sidewalks crosswalk, lighting	Isleta Drain Trail to Tapia Blvd.		GO Bonds	$ 102,580	Tier 2
Rosendo Garcia Rd.	New Sidewalks crosswalk, lighting	Coors Rd. to Isleta Drain Trail		GO Bonds	$ 449,100	Tier 2
Armijo Rd.	New Sidewalks crosswalk, lighting	Isleta Blvd. to La Vega Dr.		GO Bonds	$ 52,600	Tier 2
Foothill Rd.	New Sidewalks crosswalk, lighting	Blake Rd. to Sunset Gardens Rd.		GO Bonds	$1,129,900	Tier 2
La Vega Rd.	New Sidewalks crosswalk, lighting	Armijo Rd. to Hardy Ave.		GO Bonds	$ 212,410	Tier 2
Don Andres Rd.	New Sidewalks	Isleta Drain to Tapia Blvd.		GO Bonds	$ 197,380	Tier 2

Exhibit 27b: Bernalillo County Pedestrian and Bicycle Facility Projects - Southwest Area (continued)						
Facility	**Type**	**Description**	**Schools**	**Funding**	**Cost**	**Priority**
Sunport Railrunner Station	Sidewalks, crosswalks, lighting	Prince St. and Cmo. del Tren N Rio Bravo		HSIP	$ 259,700	Tier 1
Gun Club Rd.	Sidewalks, bike lanes, lighting	Isleta Blvd. to Coors Blvd.		GO Bonds	$ 546,260	Tier 1
Don Felipe Rd.	Sidewalks, crosswalks, lighting	Coors Blvd. to Isleta Blvd.	Pajarito ES	GO, SRTS	$ 475,500	Tier 1
Pajarito ES easement	New Sidewalks crosswalk, lighting	Don Felipe Rd. to school		SRTS	$ 80,640	Tier 1
Raymac Rd.	New Sidewalks, Bike Lanes	Coors Blvd. to Isleta Blvd.		GO Bonds	$ 428,870	Tier 1
Los Padillas Rd.	Sidewalks, crosswalks, lighting	Coors Blvd. to Isleta Blvd.	Los Padillas ES, Los Padillas CC	GO, SRTS	$ 369,660	Tier 1
Malpais Rd.	New Sidewalks crosswalk, lighting	Coors Blvd. to Isleta Blvd.		GO Bonds	$ 342,060	Tier 1
Santiago Rd./ Jensen Dr.	Sidewalks, crosswalks, lighting	Malpais Rd. to Norment Rd.		GO, SRTS	$ -	Tier 1
Metzgar Rd.	Sidewalks, crosswalks, lighting	Isleta Drain and Isleta Blvd.	Pajarito ES	GO, SRTS	$ 486,740	Tier 1
Valley Gardens Dr. (COA)	Sidewalks, crosswalks, lighting	Metzgar Rd. to Gun Club Rd.	V Gardens Park	SRTS	$ N/A	Tier 1
Shirk Ln	Sidewalks, crosswalks, lighting	Ditch and 2nd St.	Mtn View ES	GO, SRTS	$ 102,520	Tier 1
Mountain View Nbhd	New Sidewalks crosswalk, lighting	Prince St., Prosperity Av., Williams St., Murray Rd.	Mtn. View Comm. Center	GO Bonds	$ 836,860	Tier 1
Desert Rd.	New Sidewalks crosswalk, lighting	2nd St. to Broadway Blvd.		GO Bonds	$ 960,700	Tier 2
~~Powers Way~~	~~New Sidewalks crosswalk, lighting~~	~~Douglas Rd. to Coors Blvd.~~		~~GO Bonds~~	~~$ 277,840~~	~~Tier 2~~
Niese Dr./ Maplewood Av.	New Sidewalks crosswalk, lighting	Douglas Rd. to Coors Blvd.		GO Bonds	$ 337,740	Tier 2
~~Douglas Rd.~~	~~New Sidewalks crosswalk, lighting~~	~~Powers Way to Pajarito Rd.~~		~~GO Bonds~~	~~$ 565,920~~	~~Tier 2~~
~~Markham Rd.~~	~~New Sidewalks crosswalk, lighting~~	~~Coors Blvd. to Isleta Blvd.~~		~~GO Bonds~~	~~$ 424,860~~	~~Tier 2~~
Norment Rd.	New Sidewalks crosswalk, lighting	Coors Blvd. to Isleta Blvd. (easement req'd)		GO Bonds	$ 211,320	Tier 2
McKim Cir./ Palacio Dr.	New Sidewalks crosswalk, lighting	Norment Rd. to Raymac Rd.		GO Bonds	$ 443,360	Tier 2
Grace Vigil Rd.	New Sidewalks crosswalk, lighting	Gun Club Rd. to D. Chavez Blvd.		GO Bonds	$ 289,860	Tier 2

Exhibit 27c: Bernalillo County Pedestrian and Bicycle Facility Projects - Southwest Area (continued)						
Facility	**Type**	**Description**	**Schools**	**Funding**	**Cost**	**Priority**
Coors Blvd. Corridor (NMDOT)	Sidewalks, Bike Lane, Crosswalks, Lighting	Sage Rd. to Gun Club Rd. to Malpais Rd.		STP-U, CMAQ	$ 8,150,000	N/A
Bridge Blvd. Corridor	Sidewalks, Bike Lane, Crosswalks, Lighting	Coors Blvd. (via Tower) to Barelas Bridge		STP-U, CMAQ	$ 2,188,573	1
Broadway Blvd. Corridor (NMDOT)	Sidewalks, Bike Lane, Crosswalks, Lighting	Woodward Rd. to Desert Rd.		STP-U, CMAQ	$ 3,150,000	N/A
Rio Bravo / D. Chavez Corridor (NMDOT)*	Sidewalks, Bike Lane, Crosswalks, Lighting	118th St. to I-25		STP-U, CMAQ	$14,105,000	N/A
Isleta Blvd. Corridor	Sidewalks, Bike Lane, Crosswalks, Lighting	Rio Bravo Blvd. to I-25		STP-U, CMAQ	$ 4,260,000	2
Isleta Blvd. Midblock Crossings	Pedestrian HAWK Signals	Install/ replace pedestrian signals at 4 midblock crossings		HSP	$ 1,000,000	3
Second St. (South) Corridor*	Sidewalks, Bike Lane, Crosswalks, Signals, Lighting	Woodward Rd. to Desert Rd.		STP-E, CMAQ	$ 6,460,000	5
Pajarito Rd. Corridor	Sidewalks, Bike Lane, Crosswalks, Signals, Lighting	Coors Rd. to Escarpment Rd.		STP-E, CMAQ	$ 5,346,000	4
Durand OS Trail	Multi-Use Trail	Access to river levee		bonds	TBD	N/A
Amole Arroyo Trail (AMAFCA)	Multi-Use Trail	Coors Blvd. west to La Ceja open space		bonds	$ 2,200,000	N/A
Arenal Canal	Multi-Use Trail			Bonds	TBD	N/A
Isleta Drain Trail (MRGCD)	Multi-Use Trail	Central Ave. to Rio Bravo Blvd.		bonds	$ 7,600,000	2
Tijeras Arroyo Trail (AMAFCA)	Multi-Use Trail	South Diversion Channel east		bonds	$ 1,800,000	N/A
Rio Grande Trail (MRCOG)	Multi-Use Trail extension	South Diversion Channel to I-25		STP-E	$N/A	N/A
S. Diversion Channel (AMAFCA)	Multi-Use Trail extension	Sunport Blvd. to Gibson Blvd.		bonds	$ 1,760,000	N/A
Bosque Trail Reconstruction	Multi-Use Trail reconstruction	South Diversion Channel to Bridge Blvd.		STP-E; Funded	$ 998,230	1
*costs are for entire roadway reconstruction						

Exhibit 27d: Bernalillo County Regional Pedestrian and Bicycle Facility Projects - Northwest Area						
Facility	**Type**	**Description**	**Schools**	**Funding**	**Cost**	**Priority**
4th St. Corridor	Sidewalks, Bike Lane, Crosswalks, Signals, Lighting, Bus Shelters	Pso del Norte to 2nd St.		STP-U, CMAQ	$ 381,007	3
2nd St. (North) Corridor	Sidewalks, Bike Lane, Crosswalks, Signals, Lighting	Alameda Blvd. to 4th St.		STP-U, CMAQ	$ 474,600	1
Osuna Rd.	Sidewalks, Bike Lane, Crosswalks, Signals, Lighting	2nd St. to Edith Blvd.		STP-U, CMAQ	$ 384,934	2
Edith Blvd. Corridor	Sidewalks, Bike Lanes	Osuna Rd. to N. Diversion Channel		STP-U, CMAQ	$1,273,794	4
Rio Grande Blvd.	New Sidewalks, Bike Lanes	Ortega Rd. to Alameda Rd.	Bachechi OS	GO Bonds	$ 209,304	Tier 1
Ortega Rd.	New Sidewalks	Rio Grande to Edith (easement req'd)		GO Bonds	$ 599,660	Tier 1
Mission Ave.	Sidewalks, crosswalks, lighting	Edith Blvd. to Renaissance Dr.	Mission ES	GO, SRTS	$ 214,480	Tier 1
Irving Blvd.	Complete sidewalk, bike lane gaps	La Paz Dr. to Golf Course Rd.		GO Bonds	$ 536,000	Tier 1
Paradise Blvd.	Complete sidewalk gaps	La Paz Dr. to Golf Course Rd.		GO Bonds	$ 390,440	Tier 1
El Pueblo Railrunner Station	New Sidewalks	El Pueblo Rd. 2nd St. to Edith Blvd.		HSIP	$ 202,740	Tier 1
Alameda Rd.	New Sidewalks	4th St. to Edith Blvd.		GO Bonds	$ 242,280	Tier 1
Los Ranchos Rd.	Sidewalks, crosswalks, lighting	4th St. and Edith Blvd.	Los Ranchos ES	GO, SRTS	$ 327,180	Tier 1
La Paz Dr.	New Sidewalks	Irving Blvd. to Chaparral Cir.		GO Bonds	$ 229,020	Tier 1
Paradise Hills Nbhd	Sidewalk Repair, Complete gaps	28 streets	Paradise Com.Ctr SierraVista ES	GO Bonds	$2,140,000	Tier 1
Justin Dr.	New Sidewalks	Paradise Blvd. to Golf Course Rd.		GO Bonds	$ 312,760	Tier 2
Camino del Bosque	New Sidewalks	4th St. to Albuquerque Main Canal		GO Bonds	$ 185,500	Tier 2
La Orilla Rd. Trail	Multi-Use Trail, Sidewalks	Golf Course Rd. to Coors Blvd.		GO Bonds	$ 175,000	3
Paradise Blvd. Trail	Widen, extend MU Trail	La Paz Dr. to Golf Course Rd.		STP-E	$ 819,266	1
Alameda Drain Trail (MRGCD)	Multi-Use Trail	Montano Rd. to N. Diversion Channel		Bonds	$ 450,000	2
North Diversion Channel (AMAFCA)	Multi-Use Trail extension	Balloon Park to Alameda Drain Trail		Bonds	$1,260,000	N/A
Calabacillas Arroyo (AMAFCA)	Multi-Use Trail	Lyon Rd. to Gold Course Rd.		Bonds	$2,000,000	N/A

Exhibit 27e: Bernalillo County Pedestrian and Bicycle Facility Projects - Northeast Area						
Facility	**Type**	**Description**	**Schools**	**Funding**	**Cost**	**Priority**
Alameda Blvd. Corridor (East)	Sidewalks, Bike Lane, Crosswalks, MU Trail, Lighting	Ventura St. to Eubank Blvd. to Lowell		STP-U, CMAQ	$ 322,486	2
Eubank Blvd. Corridor	Sidewalks, Bike Lane, Crosswalks, MU Trail, Lighting	San Antonio Rd. to Alameda Blvd.		STP-U, CMAQ	$ 311,089	1
Paseo del Norte Corridor	Sidewalks on south side, Bike Lanes, Crosswalks, Lighting	Eubank Blvd. to Tramway Blvd.		STP-U, CMAQ	$ 244,350	3
Tennyson St.	Sidewalk connections to Tramway; bridge over S. Dom. Baca Arroyo	San Antonio to Modesto Ave.		GO Bonds	$ 493,980	Tier 1
Browning St.	New Sidewalks, Bike Lanes	San Antonio to Modesto Ave.		GO Bonds	$ 591,524	Tier 1
Holbrook St.	Sidewalks, bridge over S. Dom. Baca Arroyo not incl. in cost	Coronado Ave. to Florence Ave.		GO Bonds	$ 276240	Tier 1
Lowell St.	New sidewalks, MU Trail	Del Rey to PDN	Equestrian Park	GO Bonds	$ 276,240	Tier 1
Ventura St.	Sidewalks, crosswalks, lighting	Alameda to Florence	North Star ES	GO, SRTS	$ 171,220	Tier 1
Modesto Ave.	New Sidewalks crosswalk, lighting	Eubank Blvd. to Tramway Blvd.		GO Bonds	$ 534,600	Tier 1
Cedar Hill, Juniper Hill, Live Oak Rd.	New Sidewalks crosswalk, lighting	Loop from/to Tramway Blvd.		GO Bonds	$ 638,640	Tier 2
Tramway Ln.	New Sidewalks crosswalk, lighting	Modesto Ave. to San Bernardino Ave.		GO Bonds	$ 446,400	Tier 2
Bobcat Blvd., San Rafael Ave.	New Sidewalks crosswalk, lighting	Loop from/to Tramway Blvd.		GO Bonds	$ 533,240	Tier 2
La Cueva Arroyo Trail (AMAFCA)	Multi-Use Trail	Follows Signal Ave. to Lowell St.		GO Bonds	$ 86,750	2
S. Domingo Baca Arroyo (AMAFCA)	Multi Use Trail	Holbrook to Tramway	Equestrian Park	GO Bonds	$ 295,496	1

Funding Sources:
STP-U – Urban Surface Transportation Prog
STP-E – Surface Transportation Enhancement
HSIP – Highway Safety Improvement Program
GO Bonds – County General Obligation Bonds
SRTS – Safe Routes to School
CMAQ – Congestion Mitigation and Air Quality

8.2 Development Review

The County will use its permitting authority to require bicycle and pedestrian improvements for new developments.

✓ **Require Bicycle and Pedestrian Improvements in Master Plans and Subdivisions**

All master plans and subdivisions shall include a pedestrian and bicycling element to provide sidewalks, walkways, bike lanes, and trails. Pedestrian and bicycle access shall be provided to link residences with nearby schools, parks, community centers, and retail areas. Pedestrian access shall connect cul-de-sacs with adjoining streets. Right-of-way shall be dedicated for trails and bike lanes designated on the LRBS Map and shall be constructed as part of the subdivision improvements. Impact fees may be levied in lieu of bicycle and pedestrian facility construction.

8.3 Traffic Impact Studies

The County currently requires all subdivisions over 25 lots and all commercial development to submit a Traffic Impact Study for review and approval by Public Works.

✓ **Require TIAs Address Pedestrian and Bicyclist Safety**

All building permit submittals shall include a site plan showing:

- interior circulation
- driveways
- parking aisles and spaces
- ADA compliant facilities
- pedestrian access from the sidewalk to the building entrance
- queuing lanes at drive-through businesses
- bicycle racks
- fire lanes and emergency vehicle parking
- loading and unloading areas
- signage and pedestrian scale lighting.

8.4 Changes to Ordinances

Changes to County ordinances, including street standards will be needed to incorporate bicycle and pedestrian provisions.

✓ **Impact Fees**

The County's impact fee ordinance will need revision to allow fees to be assessed for construction of pedestrian and bikeway facilities as part of new development projects.

✓ **Build Complete Streets**

The County's street standards shall be revised to include "complete streets" language whereby all improvements on existing collectors and arterials and all new roadways will include pedestrian and bicycle facilities. The codes shall provide for development exactions or impact fees for pedestrian and bicycle improvements.

✓ **Connectivity**

Provisions shall be added to street standards to increase connectivity between subdivisions and nearby schools, parks, community centers, and retail areas. Pedestrian access shall connect cul-de-sacs with adjoining streets. In general, loop streets are preferred to cul-de-sacs. Block lengths shall be no longer than 600 feet on residential streets.

✓ **Provide Circulation Plans for Review**

A provision shall be added for all building permit submittals to include a Vehicle Movement Plan (see 7.3). All commercial developments shall provide pedestrian access from the public sidewalk to the building entrance.

8.5 Community Outreach and Education Programs

The City's Parks and Recreation Program provide bicycle and pedestrian safety education and other outreach programs to areas of the unincorporated County:

- ✓ Bike safety classes for youth and adults
- ✓ Safety awareness media campaign
- ✓ Community policing programs.

8.6 Coordination with Partner Agencies

The County will coordinate with its partners to build and complete bicycle and pedestrian facilities through-out the unincorporated area.

8.6.1 Albuquerque Public Schools

APS has a responsibility to provide safe bicycle and pedestrian facilities within their school walk zones. The County will work with APS to ensure these facilities are provided at the following schools.

- Pajarito Elementary School
- Armijo Elementary School
- Los Padillas Elementary School
- Mountain View Elementary School
- Navajo Elementary School
- Kit Carson Elementary School
- Atrisco Elementary School
- Barcelona Elementary School
- Valle Vista Elementary School
- Mission Elementary School
- Los Ranchos Elementary School
- Sierra Vista Elementary School
- Double Eagle Elementary School
- North Star Elementary School

8.6.2 Middle Rio Grande Conservancy District (MRGCD)

The County will work with MRGCD to build trails along the following drains:

- Isleta Drain in the 2035 MTP
- Arenal Canal
- Alameda/2nd Street Drain in the 2011-2017 TIP

8.6.3 Albuquerque Metropolitan Arroyo and Flood Control Authority (AMAFCA)

The County will work with AMAFCA to build trails along the following arroyos:

- Amole Arroyo
- Tijeras Arroyo
- La Cueva Arroyo
- Calabacillas Arroyo
- South Diversion Channel
- North Diversion Channel

8.6.3 City of Albuquerque (COA) DMD and Transit

The County will work with the City Department of Municipal Development to build bicycle and pedestrian facilities for corridors under both jurisdictions. In addition, the County will work with ABQ Ride to locate bus signs and benches out of the public sidewalk.

8.6.4 Mid Region Council of Governments (MRCOG)

The County will work with MRCOG to implement the Long Range Bikeways System (LRBS) facilities in the long-range Metropolitan Transportation Plan (MTP) and short-range Transportation Improvement Program (TIP).

8.6.5 New Mexico Department of Transportation (NMDOT)

A number of state roadway corridors in the County do not provide adequate pedestrian and bicycle facilities. The County will work with NMDOT to get these facilities built:

- Coors Blvd. (South) Corridor
- Dennis Chavez/ Rio Bravo Blvd.
- Broadway Blvd. (South) Corridor.

8.6.6 PNM and Water Utility Authority

The County will work with utility providers to relocate power poles, utility boxes, and water hydrants located in sidewalks. Most sidewalk obstructions inventoried as part of this plan were caused by these two entities.

Definitions

Bike Lane - A portion of the roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicycles. (AASHTO)

Bike Route - A segment of a system of bikeways designated by the jurisdiction having authority with appropriate directional and informational markers, with or without specific bicycle route number(s). (AASHTO)

Bikeway - Any road, path, or way which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes. (AASHTO)

Crime Prevention through Environmental Design (CPTED) - A multi-disciplinary approach to deterring criminal behavior through the design of the physical environment. CPTED strategies relating to public rights-of-way include:

- street and walkway lighting,
- landscaping,
- development fronting on street,
- traffic calming, and
- regular maintenance.

Deficiencies - Conditions that affect the surface of the sidewalk (i.e. scaling of surface, cracks).

Impediments - Any condition that affects the passage of pedestrians (i.e. faulted pavement, buckled pavement, plants growing over the sidewalk).

Broken pavement - Any pavement that has been broken, or cracked all the way through the thickness of the pavement, this affects the overall rating of the sidewalk. The location is to be noted even on poor condition sidewalks.

Buckling - The lifting of 2 adjacent sections of pavement by more than 3/8", presents a barrier to pedestrians as well as wheelchairs. This will not affect the overall rating of the sidewalk condition. The location is to be noted even on poor condition sidewalks.

Buffer - The space between a sidewalk and the curb.

Cracking - A horizontal or vertical crack in the pavement either part way or all the way across the surface a pavement section, which affects the overall grading of the sidewalk. Severity is graded by how many and how deep the cracks are. Severity: 1 light cracks, very few, 3 moderate cracks part way into the pavement, Severity 5 most of the surface is affected by cracks, the cracks do not go all the way through the pavement.

Detectable Warning - Raised truncated domes typically applied to the crossing surface where the pavement meets the road surface. These should be at least 24" wide and across the entire ramp width. Roughened pavement is not an adequate detectable warning.

Diagonal Crosswalk Ramp - Single ramp at apex of the corner, should have a 4ft. landing area on the bottom, out of the traffic lane, and a 4ft. landing area at the top of the ramp.

Faulting - A section of pavement either lifted or settled by more than ¼", trip hazard for pedestrians as well as a barrier for wheelchairs. The location is to be noted even on poor condition sidewalks. Severity: Less than 3/8" = 1, 3/8" to 1 = 3, Greater than 1" = 5.

Flare - The graded transition from a sidewalk to ramp.

Gap - The space between 2 pavement slabs to allow for expansion. This does affect the overall rating of the sidewalk. Severity: 0 under ½ inch ½ to1" = 3, 1" or greater = 5.

Grade - Overall grade of the sidewalk given in percent.

Obstruction - Any permanent fixture that decreases the pavement width to less than 36" wide. This does not affect the overall rating of the sidewalk. The location is to be noted on all sidewalks conditions.

Parallel Crosswalk Ramp - Ramps that are parallel to the sidewalk, located on the curved section of the curb. The ramp is actually the flare, and they will normally have a curb face at the back of the ramp.

Perpendicular Crosswalk Ramp - These ramps are perpendicular to the curb face, located on the straight section of the curb. The ramp should have a 4ft. landing pad at the top.

Ramp Slope - For crossings is given in percent.

Scaling - The breaking or peeling off of the top surface of the pavement, this will affect the overall rating of the sidewalk. Not at joints, severity 3 if less than 25% of surface and less than 3/8" deep, severity 5 more than 50% of surface or over 3/8" deep.

Severity - How serious the deficiency is, rated on a scale of 1 to 5, 1 being the best, 5 the worst.

Sidewalk Condition, Good - *Is in new or near new condition with only few if any deficiencies. A section that is below the rating for the block should be separated into a separate segment and rated accordingly.*

Sidewalk Condition, Fair to Good - *Shows some wear, just individual deficiencies, such as scaling, cracking and spalling, not effecting more than 10% of the overall segment. A section that is below or above the rating for the block should be separated into a separate segment and rated accordingly.*

Sidewalk Condition, Fair - *Shows some wear, just individual deficiencies, such as scaling, cracking and spalling, not affecting more than 20% of the overall section. Individual deficiencies should to be noted as to location. A section that is below or above the rating for the block should be separated into a separate segment and rated accordingly.*

Sidewalk Condition, Poor to Fair- *Shows wear, individual deficiencies, such as scaling, cracking and spalling. Individual deficiencies should be noted as to location. Over 35% of surface has deficiencies. A section that is below or above the rating for the block should be separated into a separate segment and rated accordingly.*

Sidewalk Condition, Poor - *The deficiencies are more than 50% of the sidewalk surface. Individual deficiency locations need not be recorded, as the condition of the sidewalk infers that the deficiencies are the majority of the surface. A section that is above the rating for the segment should be separated into a separate segment and rated accordingly.*

Slope - The cross grade of the sidewalk toward the curb.

Soft Surface Trail - Unpaved natural trail or trail surfaced with compacted earth, crusher fines, bark or gravel. Soft surface trails may accommodate equestrians, mountain bikers, joggers, and

pedestrians preferring a soft walking surface (stabilized soft trails may also accommodate wheelchair users).

Spalling - The edges of the pavement breaking within 6 inches of a joint or crack, this will affect the overall grading of the sidewalk. The depth of the cracking is important, the deeper the more the effect on severity. Severity: 1 light flaking of the edges, not more than 1/8 inch deep, 3 moderate flaking of the edges, not more than ¼ inch deep, 5 heavy flaking of the edges, depth of more than 3/8 inch.

Tier 1 Project – A pedestrian and/or bicycle facility located on a collector street or located on a local street providing access to a school, community center, or transit facility.

Tier 2 Project – A pedestrian and/or bicycle facility located on a local street.

Vegetation - When it interferes with passage of pedestrians by overgrowing the pavement surface, overhanging the pavement, growing in gaps of the pavement, or growing in the curb to sidewalk joint. This does not affect the overall rating of the sidewalk.

Vehicle Movement Plan – A site plan showing: interior circulation for ingress-egress, driveways, parking aisles, parking spaces, ADA compliant facilities, pedestrian access from the public sidewalk to the building entrance, queuing lanes at drive-through businesses, bicycle racks, fire lanes and emergency vehicle parking, loading and unloading areas, signage, lighting, and other facilities. The plan shall dimension all features, preserve vision clearance, and include information on surface pavement materials.

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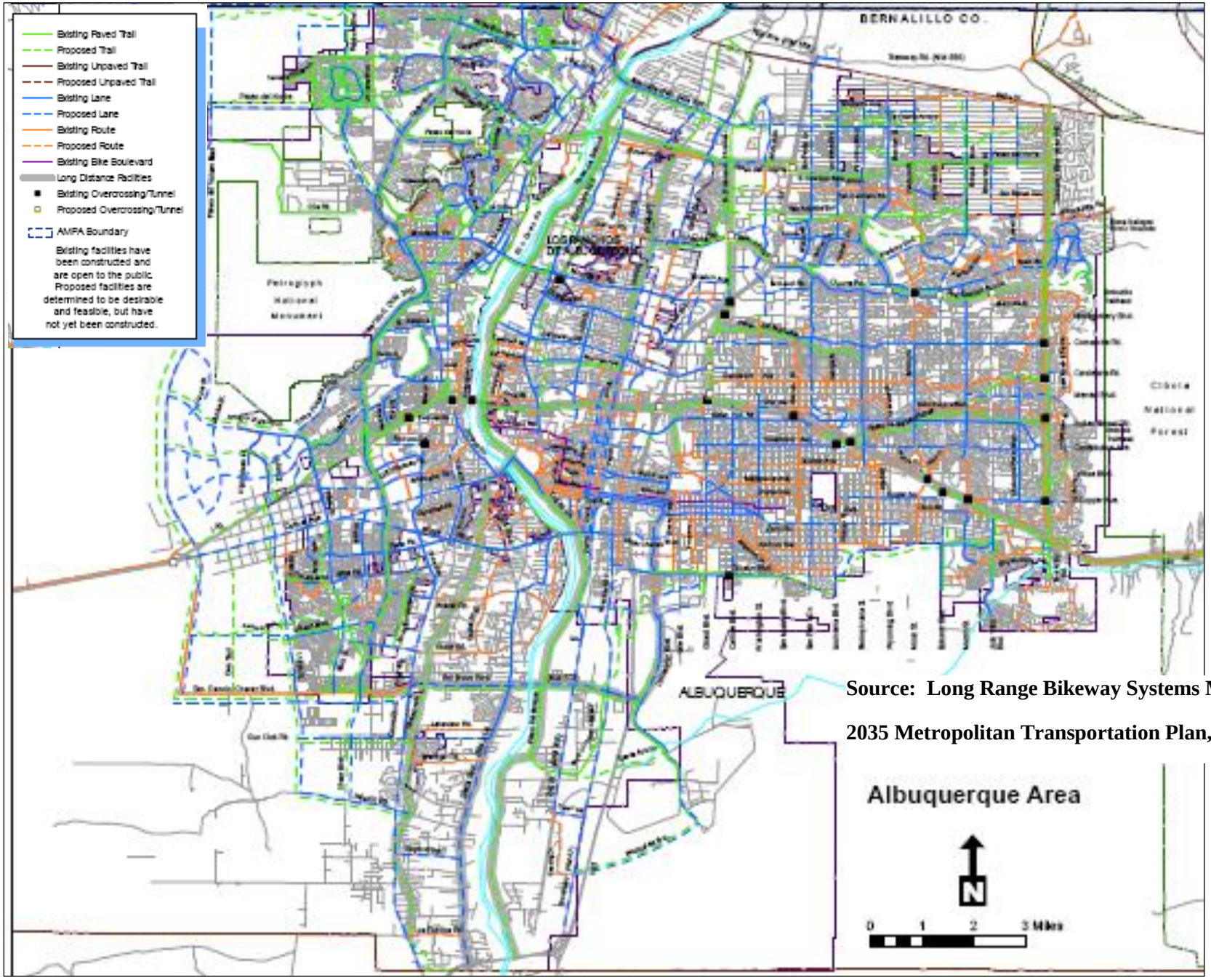
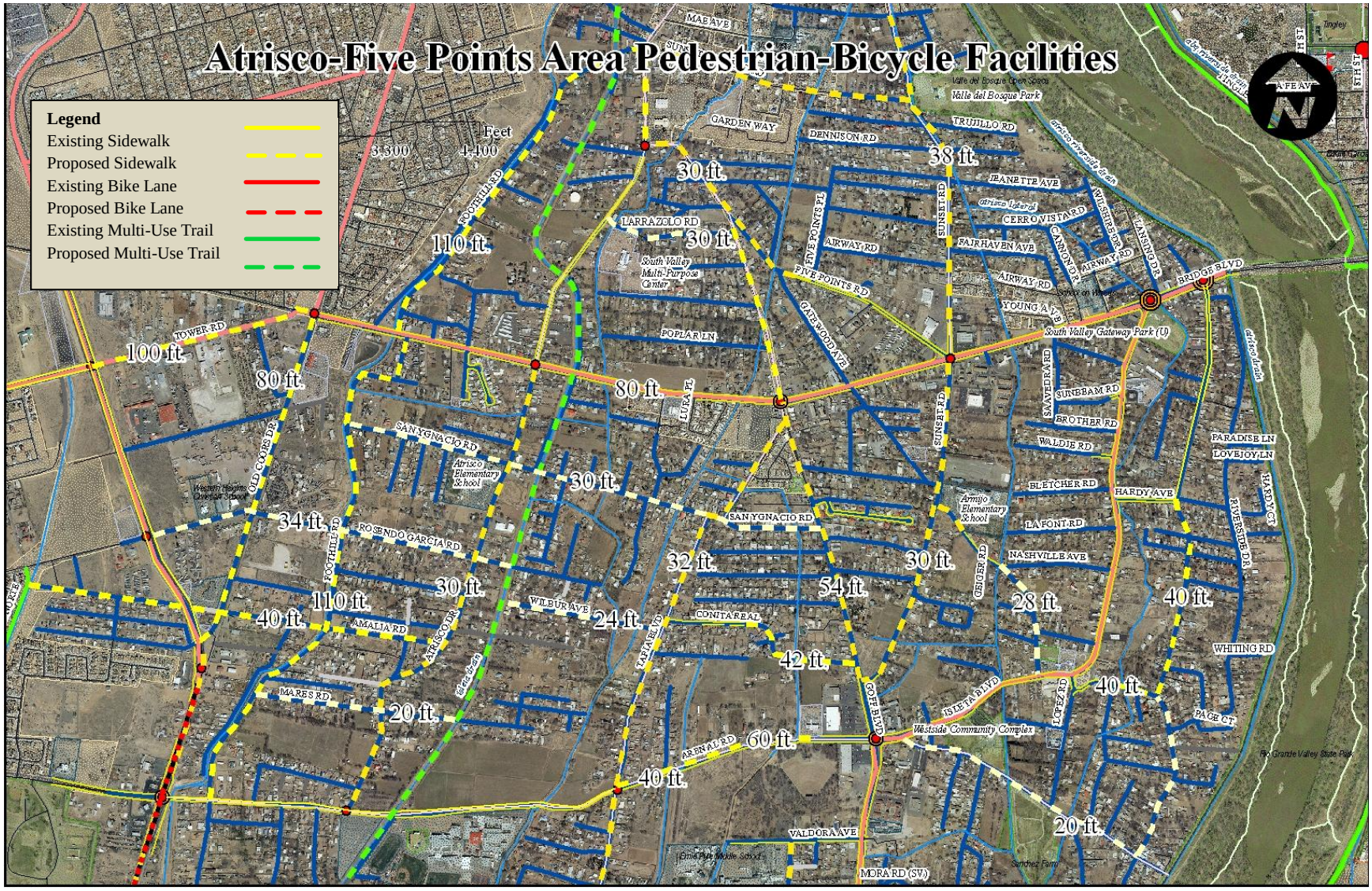
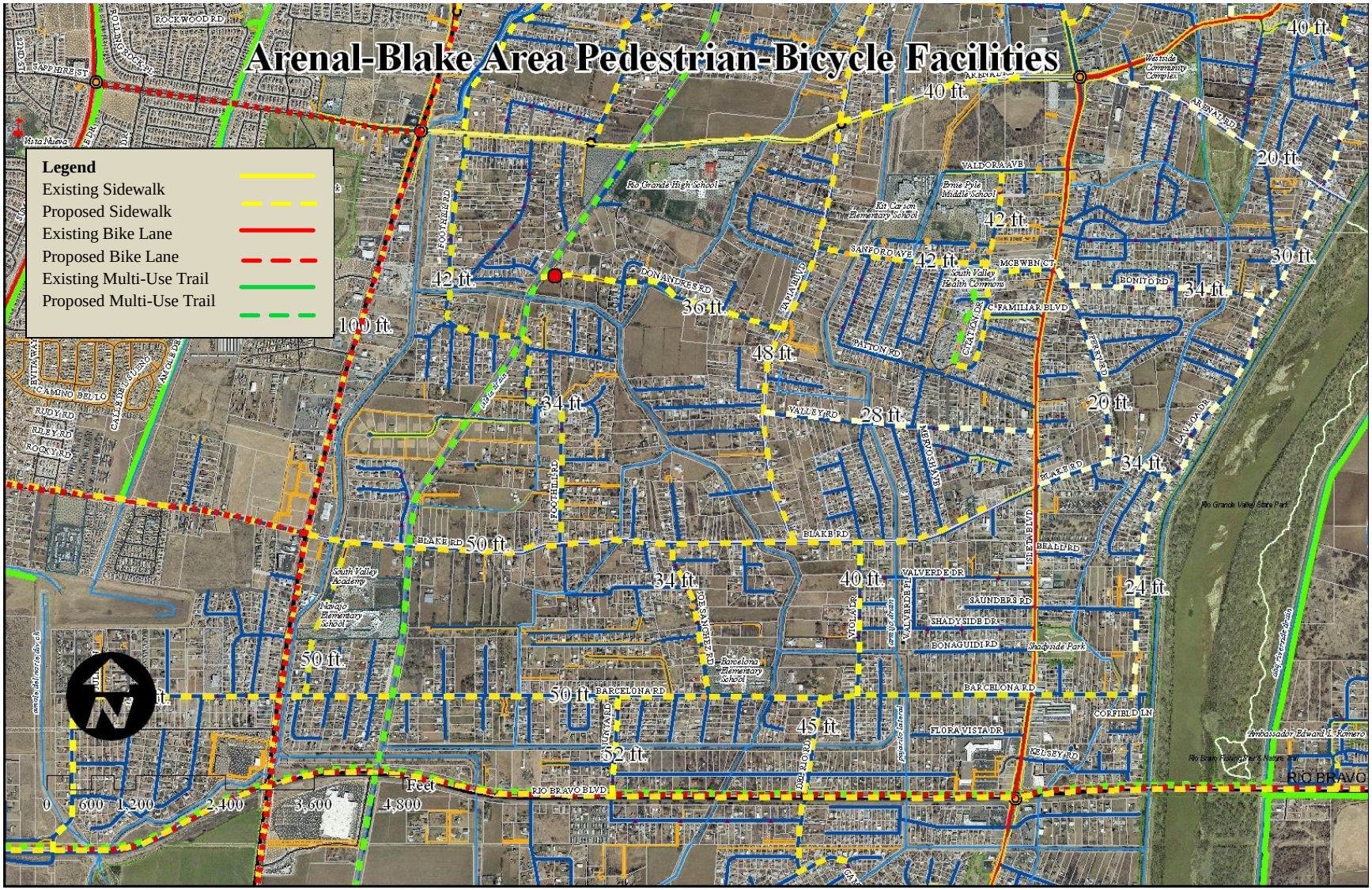


Source: Long Range Bikeway Systems Map, 2035 Metropolitan Transportation Plan, MRCOG, 2011

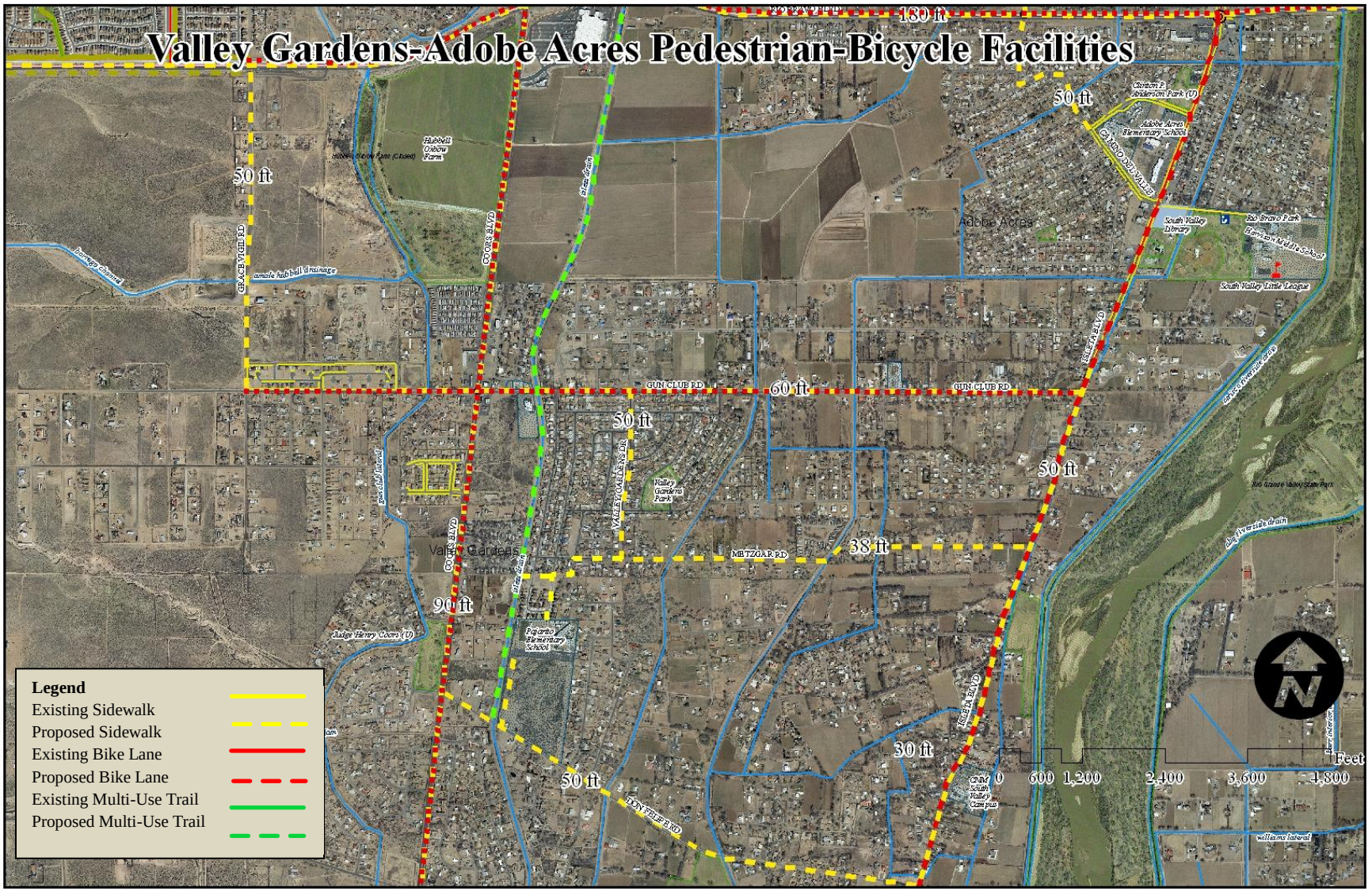
Atrisco-Five Points Bicycle-Pedestrian Facilities Map



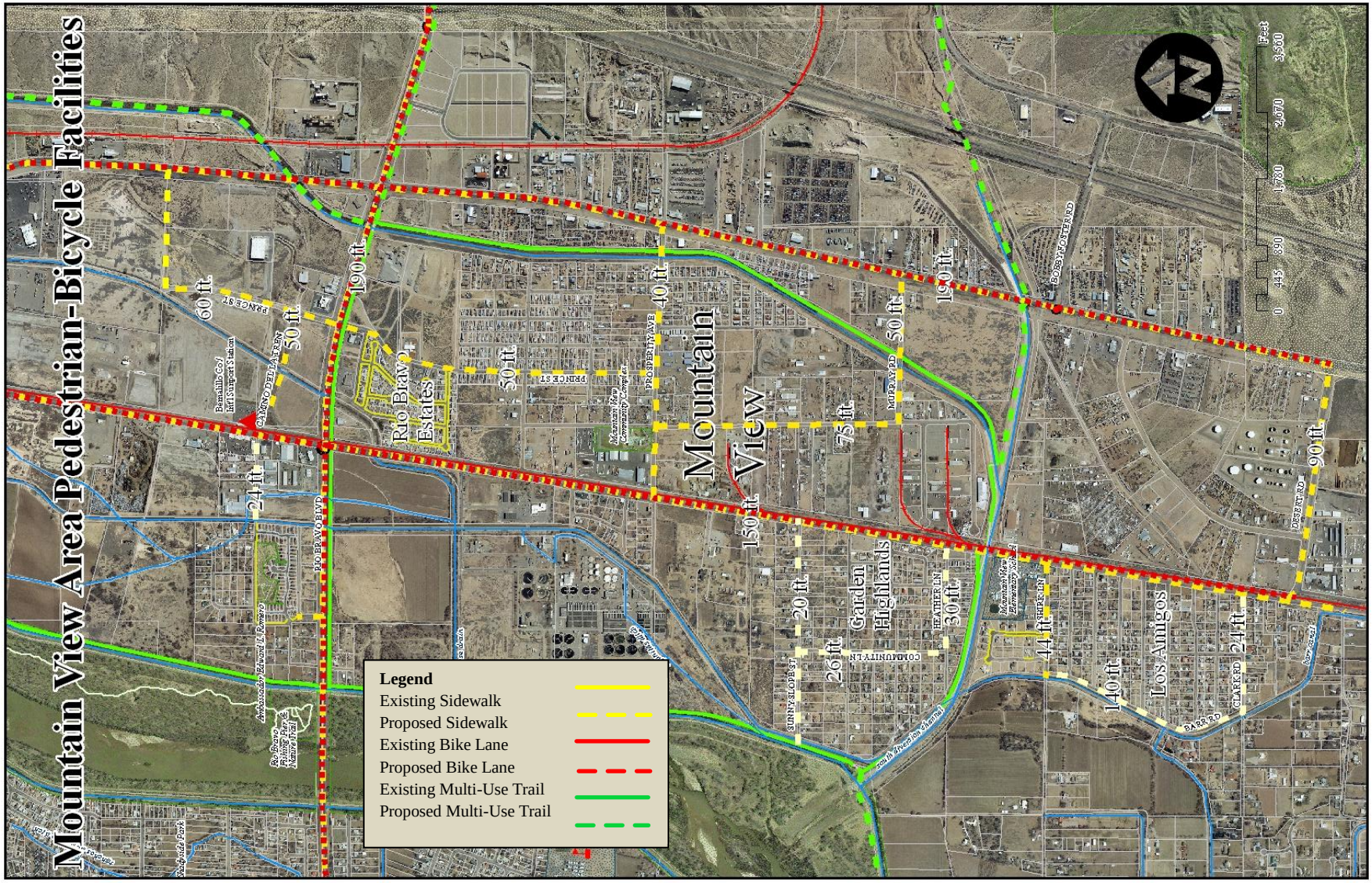
Arenal-Armijo Bicycle-Pedestrian Facilities Map



Valley Gardens-Adobe Acres Bicycle-Pedestrian Facilities Map

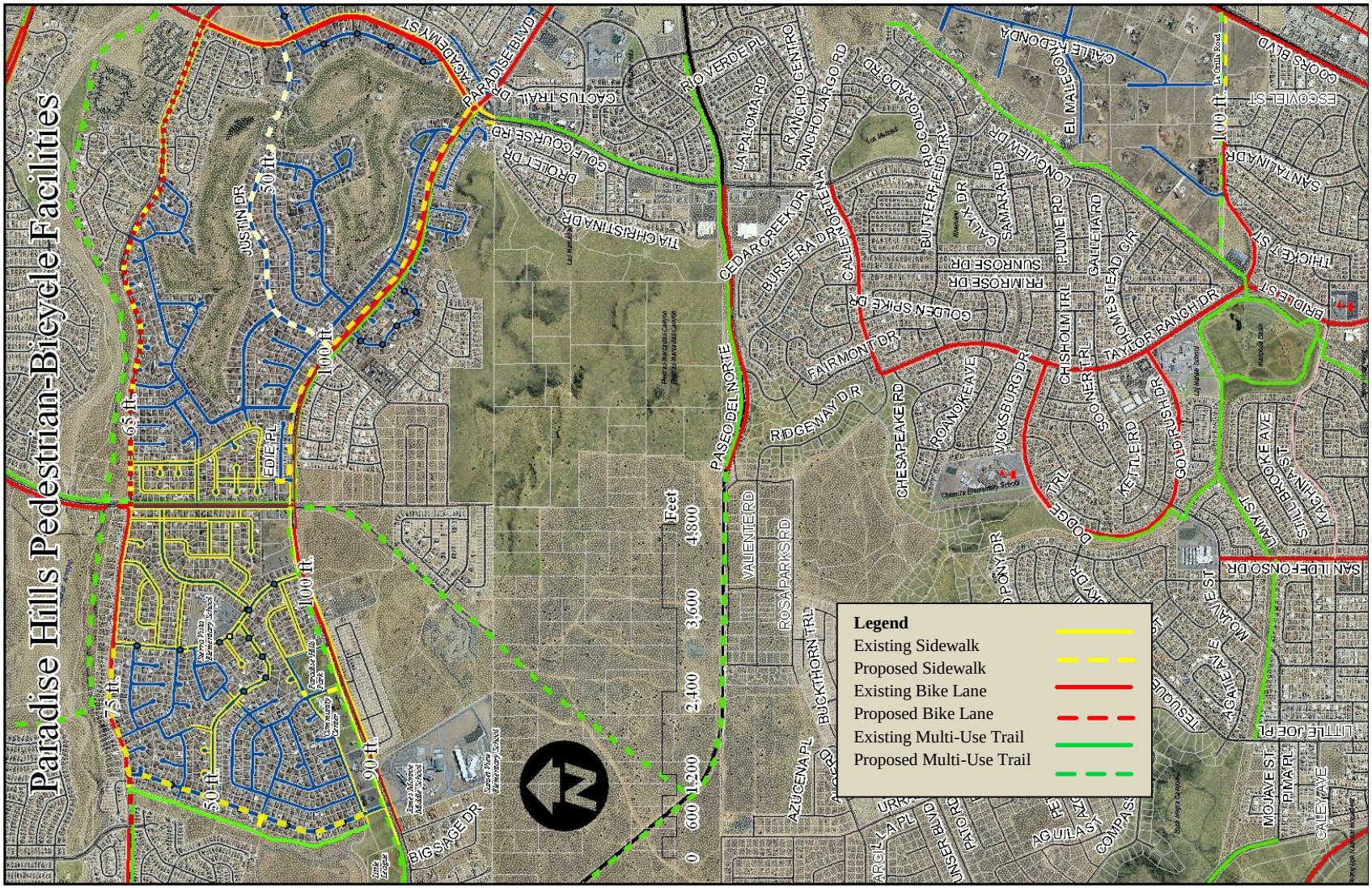


Mountain View Bicycle-Pedestrian Facilities Map

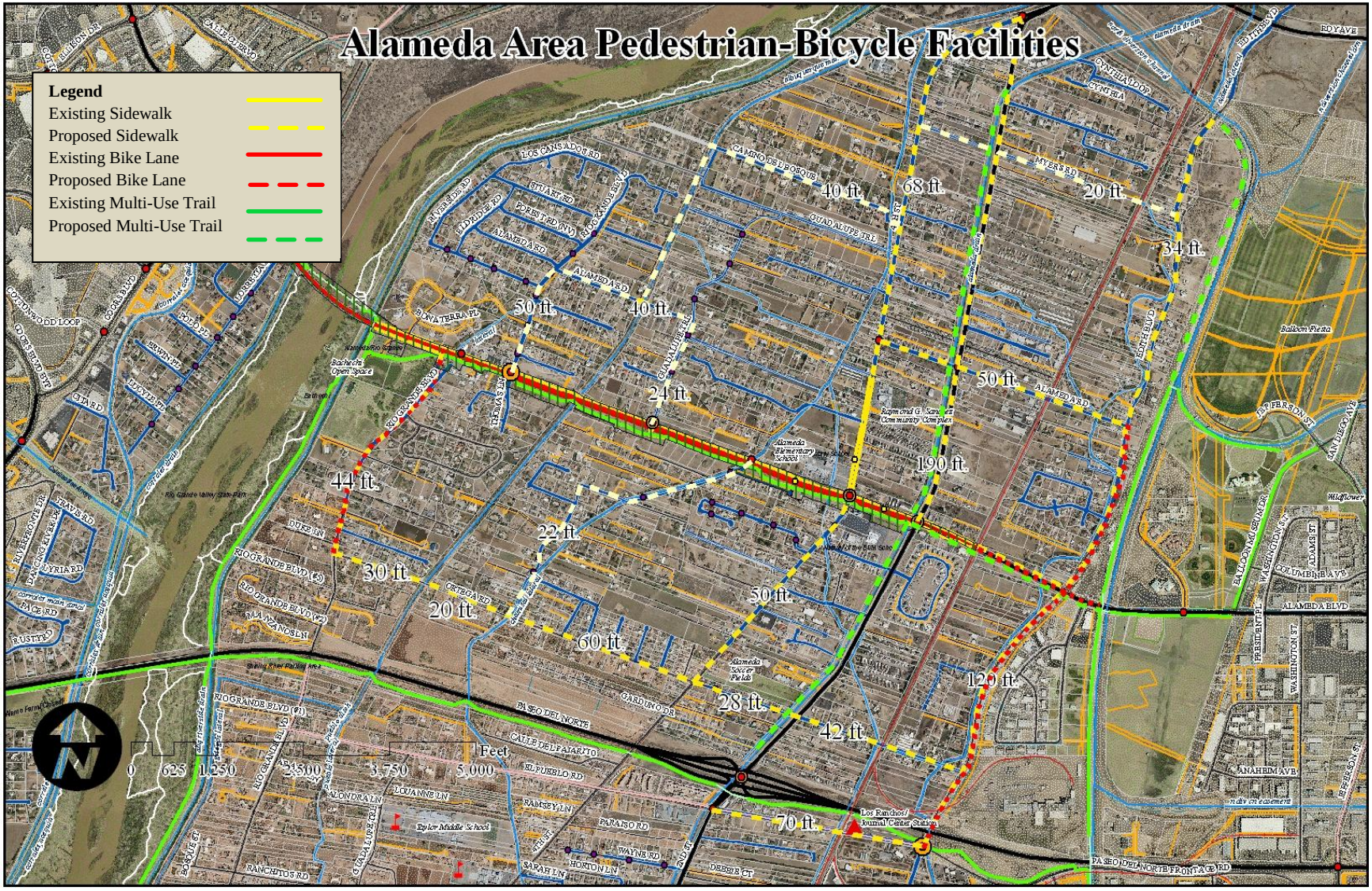


Pajarito-Los Padillas Bicycle Pedestrian Facilities Map

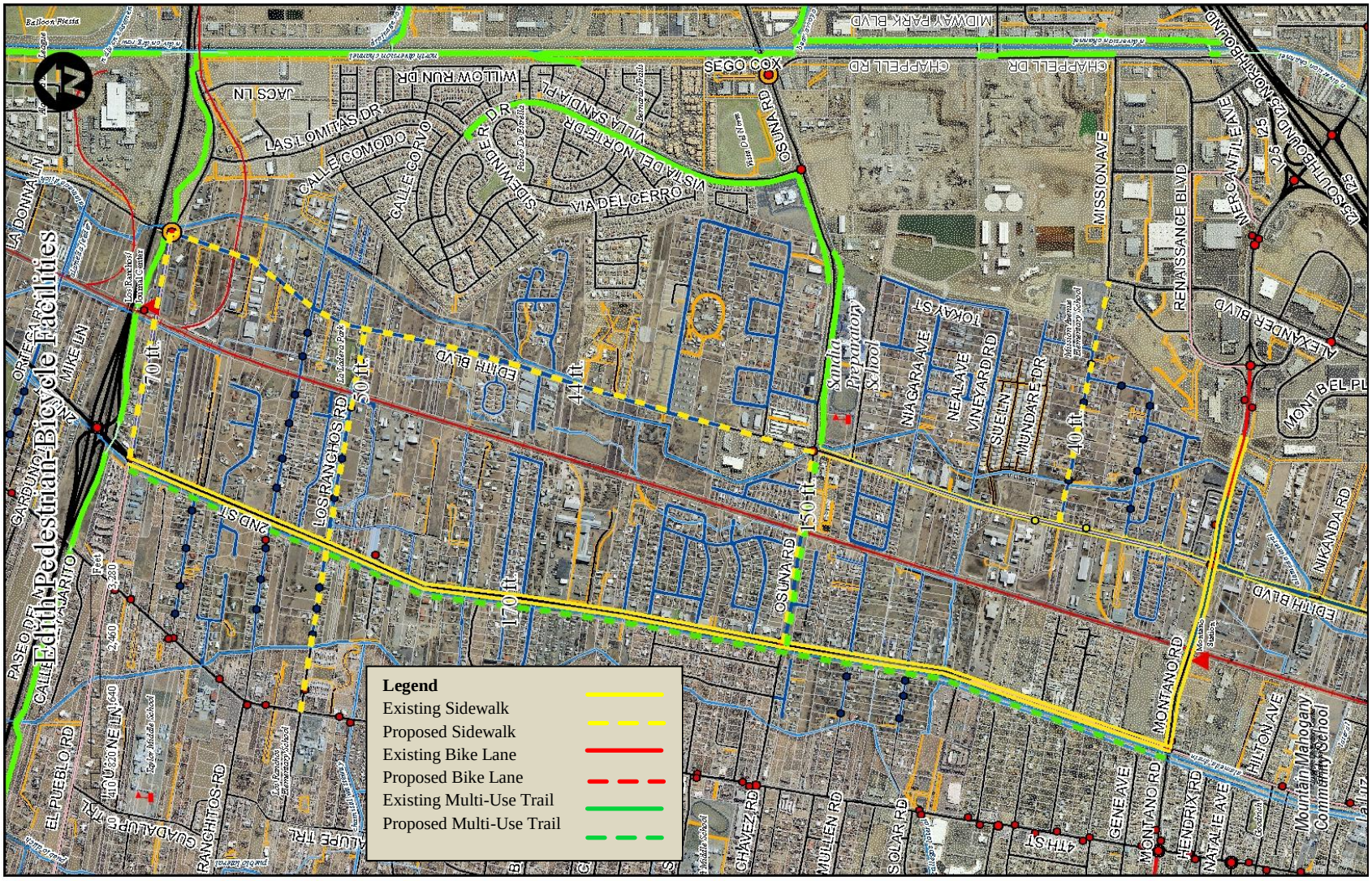
Paradise Hills Bicycle-Pedestrian Facilities Map



Alameda Bicycle-Pedestrian Facilities Map



Edith Corridor Bicycle Pedestrian Facilities Map



North Albuquerque Acres Bicycle-Pedestrian Facilities Map